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Sci & Tech Inf. Cntr.  
SEP 04 RELJ  
Pat. & T.M. Office

Access DB# 236281

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: 9-4-'07  
Art Unit: 1752 Phone Number 302-1333 Serial Number: 10/522,036  
Mail Box and Bldg/Room Location: 9C15 Results Format Preferred (circle): PAPER DISK E-MAIL  
(Rem)

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc. if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Plz. See B-6.

Inventors (please provide full names): \_\_\_\_\_

Earliest Priority Filing Date: \_\_\_\_\_

*\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

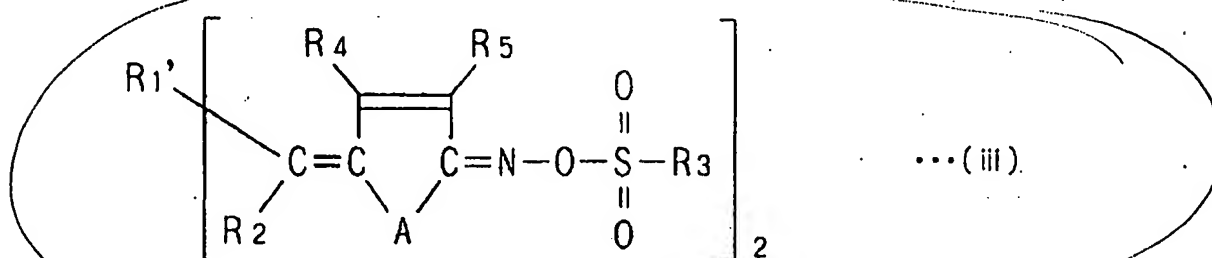
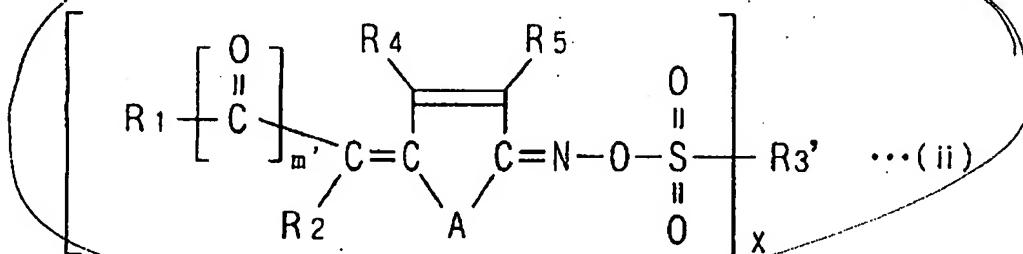
Please search for a photacid generator

of formula (ii) or (iii) of Cl. #1

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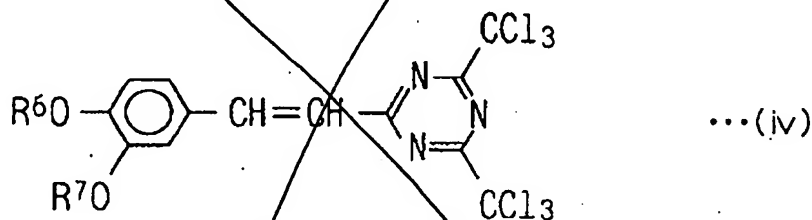
### STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
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Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) _____	Questel/Orbit _____
Date Searcher Picked Up: _____	Bibliographic _____	Dr.Link _____
Date Completed: <u>9-13-07</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: _____	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: _____	Other _____	Other (specify) _____



wherein  $m'$  represents 0 or 1;  $X$  represents 1 or 2;  $R_1$  represents a phenyl group which may be substituted with one or more alkyl groups having 1 to 12 carbon atoms, a heteroaryl group, or an alkoxy carbonyl group having 2 to 6 carbon atoms, a phenoxy carbonyl group or CN when  $m'$  is 0;  $R_1'$  represents an alkylene group having 2 to 12 carbon atoms;  $R_2$  represents a phenyl group which may be substituted with one or more alkyl groups having 1 to 12 carbon atoms, a heteroaryl group, or an alkoxy carbonyl group having 2 to 6 carbon atoms, phenoxy carbonyl group or CN when  $m'$  is 0;  $R_3$  represents an alkyl group having 1 to 18 carbon atoms;  $R_3'$  represents an alkyl group having 1 to 18 carbon atoms when  $X = 1$ , or an alkylene group having 2 to 12 carbon atoms or a phenylene group when  $X = 2$ ;  $R_4$  and  $R_5$  each independently represents a hydrogen atom, halogen, or an alkyl group having 1 to 6 carbon atoms;  $A$  represents S, O or  $NR_6$ ; and  $R_6$  represents a hydrogen atom or a phenyl group.

a bis(trichloromethyl)triazine compound represented by the following formula (iv):

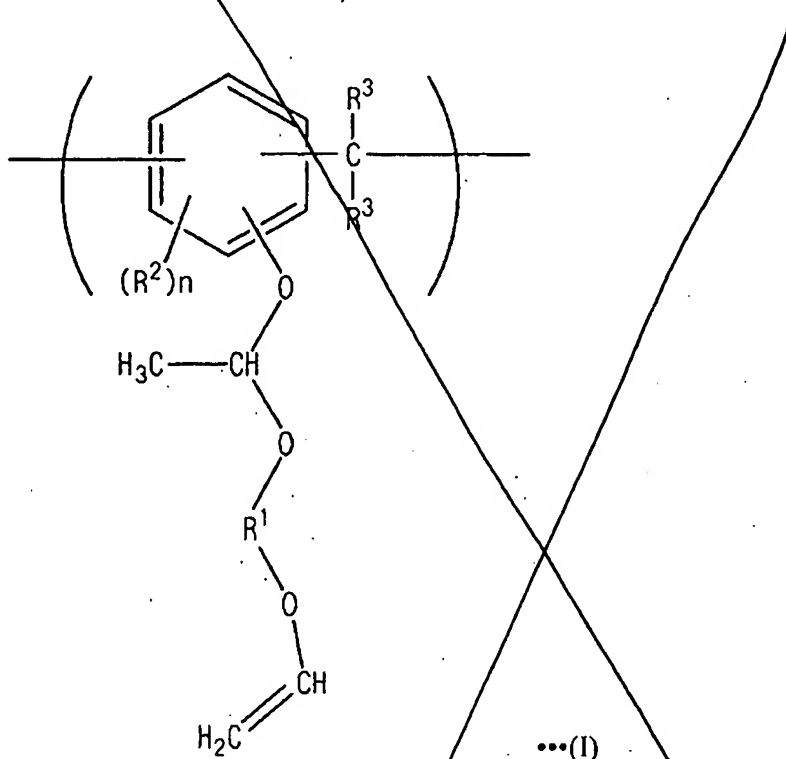


wherein  $R^6$  and  $R^7$  each represents alkyl group having 1 to 3 carbon atoms.

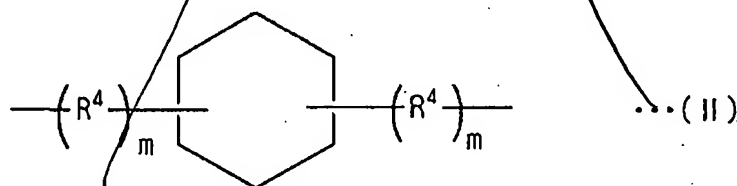
# AMENDMENTS TO THE CLAIMS

1. (Currently amended) A chemical amplification type positive photoresist composition prepared by dissolving:

(A) a slightly alkali-soluble or alkali-insoluble novolak resin having a property that solubility in an aqueous alkali solution is enhanced in the presence of an acid, comprising either or both of a constituent unit (a1) represented by the following general formula (I):

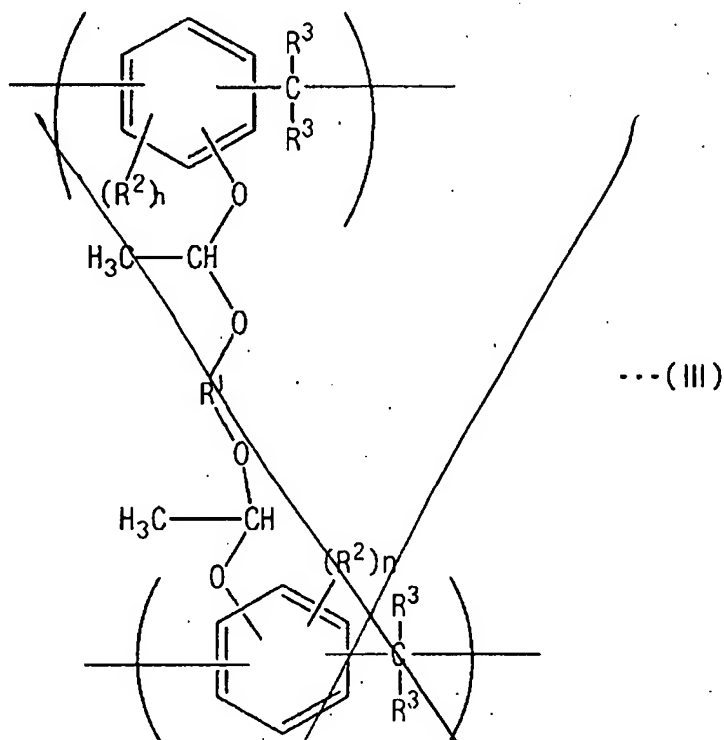


wherein  $R^1$  represents either an alkylene group having 1 to 10 carbon atoms which may have a substituent or a group represented by the following general formula (II):



(wherein  $R^4$  represents an alkylene group having 1 to 10 carbon atoms which may have a substituent and  $m$  represents 0 or 1), the alkylene group may have an oxygen bond (ether bond) in the main chain,  $R^2$  and  $R^3$  each independently represents a hydrogen atom or an alkyl group

having 1 to 3 carbon atoms, and n represents an integer of 1 to 3, and an intermolecular crosslinked moiety (a2) represented by the following general formula (III):



wherein R<sup>1</sup> represents either an alkylene group having 1 to 10 carbon atoms which may have a substituent or a group represented by the above general formula (II) (wherein R<sup>4</sup> represents an alkylene group having 1 to 10 carbon atoms which may have a substituent and m represents 0 or 1), the alkylene group may have an oxygen bond (ether bond) in the main chain, R<sup>2</sup> and R<sup>3</sup> each independently represents hydrogen atom or alkyl group having 1 to 3 carbon atoms, and n represents an integer of 1 to 3; and

(B) a compound generating an acid under irradiation, wherein said

compound is represented by the following general formulas (ii) and (iii):

=> FILE REG

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=> D HIS

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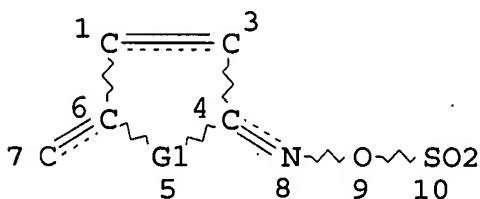
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0 S L3

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68 S L3  
L6 26 S 1840-2003/PY,PRY AND L5

FILE 'REGISTRY' ENTERED AT 12:41:18 ON 13 SEP 2007

=> D L3 QUE STAT

L1 STR



VAR G1=N/O/S

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE

L3 49 SEA FILE=REGISTRY SSS FUL L1

100.0% PROCESSED 58 ITERATIONS  
SEARCH TIME: 00.00.01

49 ANSWERS

=&gt; FILE ZCA

FILE 'ZCA' ENTERED AT 12:41:27 ON 13 SEP 2007

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

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=&gt; D L6 1-26 BIB ABS HITSTR HITRN

L6 ANSWER 1 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 146:283865 ZCA

TI Chemically amplified positive resist composition comprising two  
kinds of photoacid generator having high absorption at 248 nm and  
acid-labile resin which insoluble or hardly soluble in alkali  
aqueous solution but becomes soluble by action of acid

IN Kim, Sang Tae; Takahashi, Kenji; Sung, Shi Jin; Yang, Don Sik; Park,  
Han Woo

PA Dongwoo Fine-Chem Co., Ltd., S. Korea

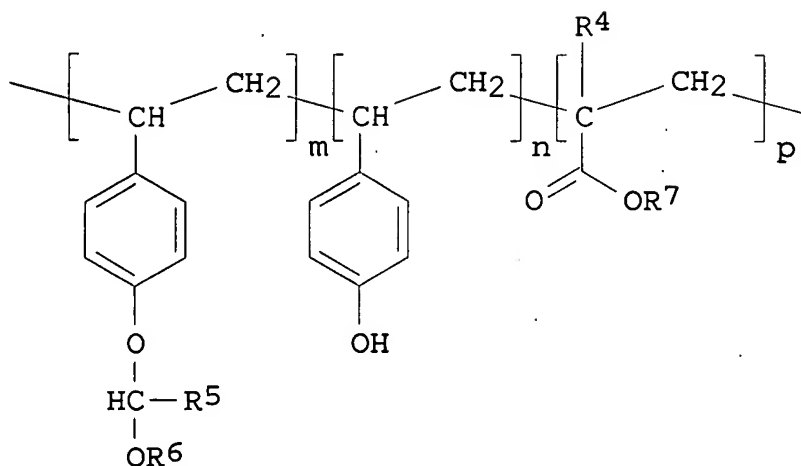
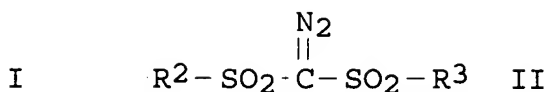
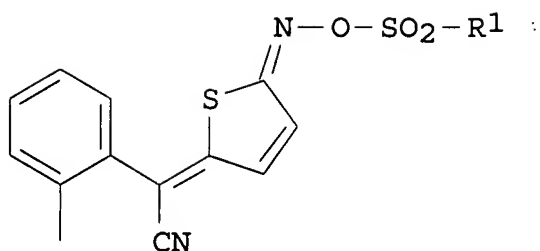
SO Repub. Korean Kongkae Taeho Kongbo, No pp. given  
CODEN: KRXXA7

DT Patent

LA Korean

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	KR 2005061640	A	20050623	KR 2003-92853	20031218
PRAI	KR 2003-92853		20031218	<--	
GI					



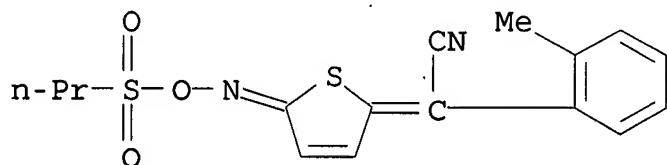
III

AB Provided is a chem. amplified pos. resist compn. which has satisfactory sensitivity, resoln., residual film rate and coating property and is improved in profile and depth of focus in case of the formation of a pattern under the thick film condition. The chem. amplified pos. resist compn. comprises two photoacid generators represented by the formula [I and II where R1 is a C1-C10 linear, branched or cyclic alkyl group, a fluoroalkyl group or a C6-C11 aryl group optionally substituted with a halogen atom; R2 and R3 are a C3-C8 linear, branched or cyclic alkyl group]; and a resin which is insol. or hardly sol. in an alkali aq. soln. but becomes sol. after the dissocn. of an acid-labile group by the action of an acid and is represented by the formula [III where R4 is H or CH3; R5 is H or a C1-C6 linear, branched or cyclic alkyl group; R6 is a C1-C10 linear, branched or cyclic alkyl group; m, n and p are independently a natural no. and satisfy the conditions of  $0.10 \leq (a+c)/(m+n+p) \leq 0.50$  or  $0.01 \leq c/(m+n+p) \leq 0.40$ ; and R7 is a C1-C10 linear, branched or cyclic alkyl group].

IT 282713-83-1

(chem. amplified pos. resist compn. comprising two kinds of photoacid generators and acid-labile resin)

RN 282713-83-1 ZCA  
 CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-  
 [[(propylsulfonyl)oxy]imino]-2(5H)-thienylidene] - (CA INDEX NAME)



IT 282713-83-1  
 (chem. amplified pos. resist compn. comprising two kinds of  
 photoacid generators and acid-labile resin)

L6 ANSWER 2 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 142:345148 ZCA

TI Photoresist, its purification and photoresist composition showing  
 improved sensitivity, contrast, and line-edge-roughness to extreme  
 UV

IN Ueda, Mitsuru; Ishii, Hirohisa

PA Idemitsu Kosan Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 32 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005075767	A	20050324	JP 2003-307443	20030829

PRAI JP 2003-307443

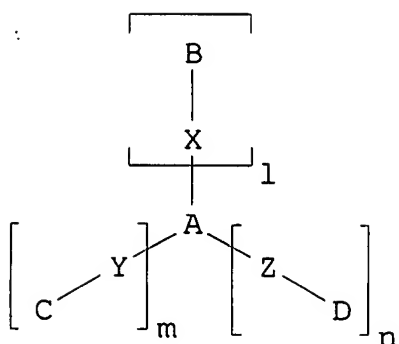
OS MARPAT 142:345148

GI

20030829 <--

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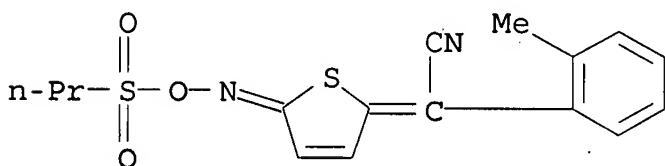
AB The title photoresist comprises an extreme UV light-reactive org. compd. represented by I (A = C1-50-aliph., C6-50-arom., etc.; B, C, D = extreme UV light-reactive group-contg. C1-50-aliph., C6-50-arom., etc.; X, Y, Z = single bond, ether linkage; l, m, n = 0-5) and ≤10 ppm of basic impurities. The chem. amplified photoresist compn. is sensitive to extreme UV and electron beam.

IT 282713-83-1

(photoacid generator; photoresist, its purifn. and photoresist compn. showing improved sensitivity, contrast, and line-edge-roughness to extreme UV)

RN 282713-83-1 ZCA

CN Benzeneacetonitrile, 2-methyl-α-[5-[(propylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



IT 282713-83-1

(photoacid generator; photoresist, its purifn. and photoresist compn. showing improved sensitivity, contrast, and line-edge-roughness to extreme UV)

L6 ANSWER 3 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 142:45917 ZCA

TI A chemically amplified photoresist compositions for extreme-UV lithography

IN Henderson, Clifford L.; Hoskins, Trevor; Berger, Cody M.

PA Georgia Tech Research Corporation, USA

SO U.S. Pat. Appl. Publ., 13 pp.

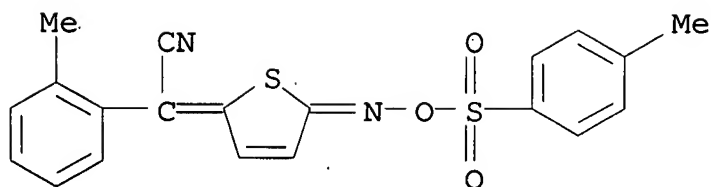
CODEN: USXXCO

DT Patent

LA English

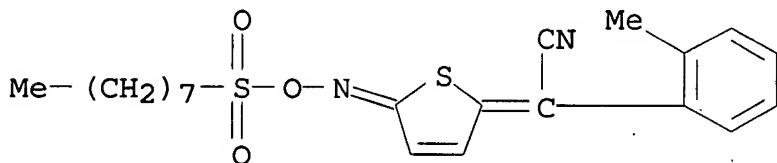
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 2004248034	A1	20041209	US 2004-862759	20040607
				<--	
	US 7223518	B2	20070529		
	WO 2004108769	A2	<del>20041216</del>	WO 2004-US17865	20040607
				<--	
	WO 2004108769	A3	<del>20061019</del>		
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RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI	US 2003-476432P	P	20030606	<--	
AB	Thus, a photoresist compn. for extreme-UV lithog. includes a polymer that is transparent at spectral range 193 and 157 nm, and an onium salt-based photoacid generator that has substantial absorption in this spectral region. The compn. has a ratio of a first dissoln. (before light exposure) rate and a second dissoln. (after light exposure) rate > 1.1.				
IT	219651-32-8 219651-37-3 282713-83-1 (photoacid generator; chem. amplified photoresist compns. for extreme-UV lithog.)				
RN	219651-32-8 ZCA				
CN	Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-[[[(4-methylphenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)				



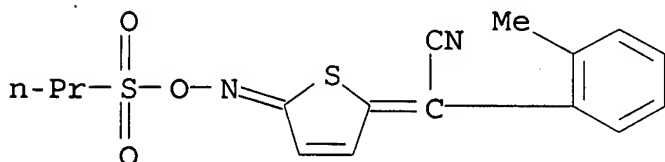
RN 219651-37-3 ZCA

CN Benzeneacetonitrile, 2-methyl-α-[5-[[[octylsulfonyl]oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



RN 282713-83-1 ZCA

CN Benzeneacetonitrile, 2-methyl-α-[5-[[[propylsulfonyl]oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



IT 219651-32-8 219651-37-3 282713-83-1

(photoacid generator; chem. amplified photoresist compns. for extreme-UV lithog.)

RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 141:417940 ZCA

TI Negative-working alkali-developable polyamic acid composition

IN Ueda, Mitsuru; Shibasaki, Yuji; Watanabe, Yasushi

PA JSR Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.

KIND DATE

APPLICATION NO.

DATE

PI JP 2004325540 A 20041118 JP 2003-116661

200304  
22

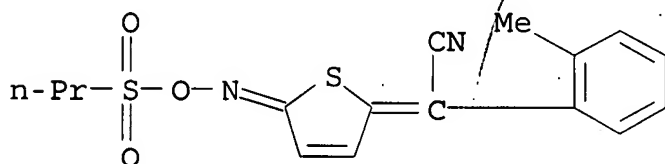
PRAI JP 2003-116661 20030422 <--

AB The compn. contains (a) a polyamic acid, (b) a photoacid generator, (c) a crosslinking agent, and (d) an org. solvent. Clear neg. pattern with good heat resistance is obtained.

IT 282713-83-1  
(photoacid generator; neg.-working alkali-developable polyamic acid compn. contg. polyamic acid)

RN 282713-83-1 ZCA

CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-  
[[ (propylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



IT 282713-83-1  
(photoacid generator; neg.-working alkali-developable polyamic acid compn. contg. polyamic acid)

L6 ANSWER 5 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 141:403470 ZCA

TI Chemical amplification positive-working photoresist composition, its thick laminate, formation of thick resist pattern and connection terminal

IN Okui, Toshiki; Misumi, Koichi

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 23 pp.

CODEN: JKXXAF

DT Patent

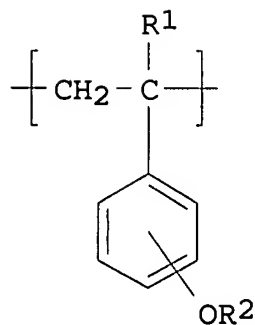
LA Japanese

FAN.CNT 1

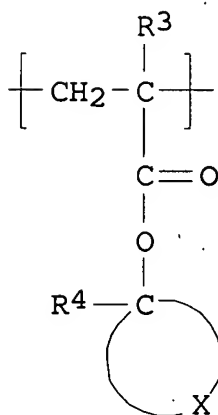
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004309777	A	20041104	JP 2003-102957	20030407

PRAI JP 2003-102957 20030407 <--

GI



I



II

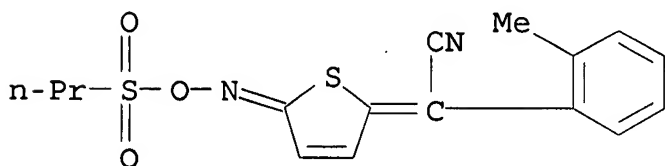
AB The compn. contains (A) a compd. generating an acid by the action of actinic ray or irradiation and (B) a resin compn., whose soly. to alkali increases by the action of the acid, contg. (b1) a resin with structural unit I (R1 = H, Me; R2 = acid labile group) and (b2) a resin with structural unit II (R3 = H, Me; R4 = C1-4 alkyl; X = atoms to form 5- to 20-membered hydrocarbon ring). The laminate comprises a support and 10-150  $\mu\text{m}$ -thick layer of the photoresist. The thick resist pattern is manufd. by (1) forming the photoresist laminate, (2) selectively irradiating the actinic ray or radiation, and (3) developing the resist. Conductive connection terminal is formed on the non-resist area of the pattern. The compn. shows high resoln., good developability, and plating resistance.

IT 282713-83-1

(acid generator; chem. amplification thick photoresist compn. for connection terminal formation)

RN 282713-83-1 ZCA

CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-[(propylsulfonyl)oxy]imino]-2(5H)-thienylidene] - (CA INDEX NAME)



IT 282713-83-1

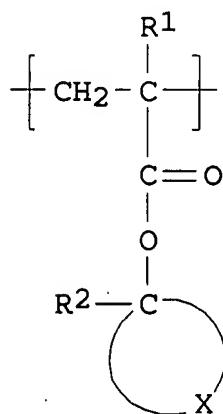
(acid generator; chem. amplification thick photoresist compn. for connection terminal formation)

L6 ANSWER 6 OF 26 ZCA COPYRIGHT 2007 ACS on STN  
 AN 141:386395 ZCA  
 TI Chemical amplification positive-working photoresist composition, its thick laminate, formation of thick resist pattern and connection terminal  
 IN Okui, Toshiki; Misumi, Koichi  
 PA Tokyo Ohka Kogyo Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 23 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004309775	A	2004.11.04	JP 2003-102955	2003.04.07
PRAI	JP 2003-102955		2003.04.07	<--	
GI					



I

AB The compn. contains (A) a compd. generating an acid by the action of actinic ray or irradiation, (B) a resin with structural unit I (R<sup>1</sup> = H, Me; R<sup>2</sup> = lower alkyl; X = atoms to form 5- to 20-membered hydrocarbon ring) and whose solubility to alkali increases by the action of the acid, and (C) an alkali-soluble resin. The laminate comprises a support and 10-150 μm-thick layer of the photoresist. The thick resist pattern is manufactured by (1) forming the photoresist laminate,

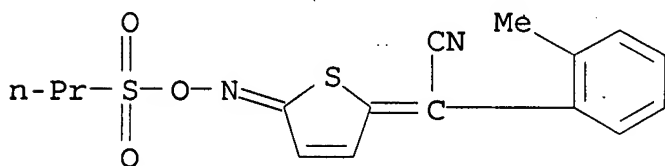
(2) selectively irradiating the actinic ray or radiation, and (3) developing the resist. Connection terminal is formed on the non-resist area of the pattern. The compn. shows high contrast, gives clear patterns, and good plating resistance.

IT 282713-83-1

(acid generator; chem. amplification thick photoresist compn. for manuf. of connection terminal)

RN 282713-83-1 ZCA

CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-  
[[propylsulfonyl]oxy]imino]-2(5H)-thienylidene] - (CA INDEX NAME)



IT 282713-83-1

(acid generator; chem. amplification thick photoresist compn. for manuf. of connection terminal)

L6 ANSWER 7 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 141:372780 ZCA

TI Chemical amplification positive-working photoresist composition, its thick laminate, formation of thick resist pattern and connection terminal

IN Okui, Toshiki; Misumi, Koichi

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 23 pp.

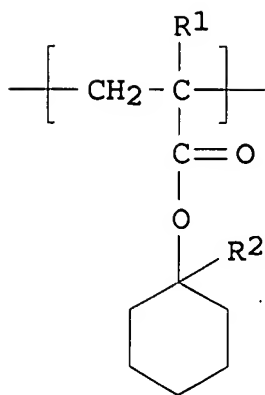
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PRAI	JP 2003-102958		20030407	<--	
GI					



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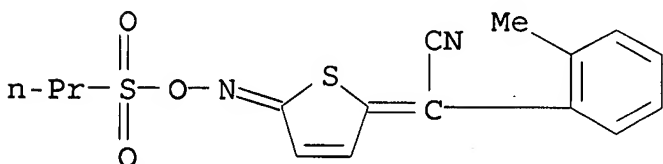
AB The compn. contains (A) a compd. generating an acid by the action of actinic ray or irradiation and (B) a resin with structural unit I ( $R_1 = H, Me$ ;  $R_2 = \text{lower alkyl}$ ), whose solubility to alkali increases by the action of the acid. The laminate comprises a support and 10-150  $\mu\text{m}$ -thick layer of the photoresist. The thick resist pattern is manufactured by (1) forming the photoresist laminate, (2) selectively irradiating the actinic ray or radiation, and (3) developing. Conductive connection terminal is formed on the non-resist area of the pattern. The compn. shows high contrast, gives clear patterns, and good plating resistance.

IT 282713-83-1

(acid generator; chem. amplification thick photoresist compn. for manuf. of connection terminal)

RN 282713-83-1 ZCA

CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-[[propylsulfonyl]oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



IT 282713-83-1

(acid generator; chem. amplification thick photoresist compn. for manuf. of connection terminal)

L6 ANSWER 8 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 141:131285 ZCA



TI Photoresists material and method for pattern formation using the same

IN Kato, Hideto; Noda, Kazumi

PA Shin-Etsu Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 17 pp.

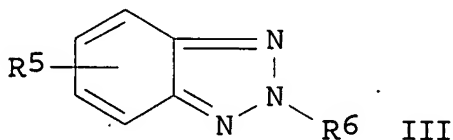
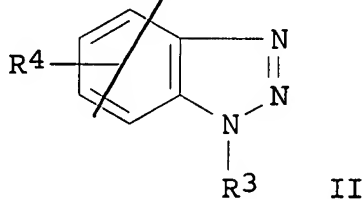
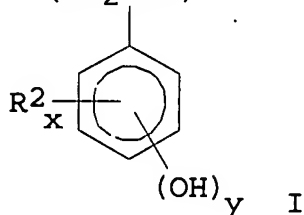
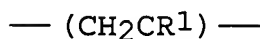
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004198944	A	20040715	JP 2002-370106	20021220
PRAI	JP 2002-370106		20021220	<--	
OS	MARPAT 141:131285				
GI					



AB The title material contains a polymer, 0.6-19 parts of an acid generator, and a 0.01-10 parts of a benzotriazole deriv. based on 100 parts of the polymer and has 30-60 % of the total content of the above components, wherein the polymer has 3,000-300,000 wt. av. mol. wt. and repeating unit I (R<sup>1</sup> = H, methyl; R<sup>2</sup> = C<sub>1</sub>-8 alkyl; x = integer ≥ 0; y = integer > 0; x + y ≤ 5), wherein benzotriazole deriv. is chosen from: (5-(4-methylphenyl)sulfonyloxyimino-5H-thiophen-2-ylidene)-(2-methylphenyl)acetonitrile; (5-propylsulfonyloxyimino-5H-thiophene-2-ylidene)-(2-methylphenyl)acetonitrile; (5-camphorsulfonyloxyimino-5H-

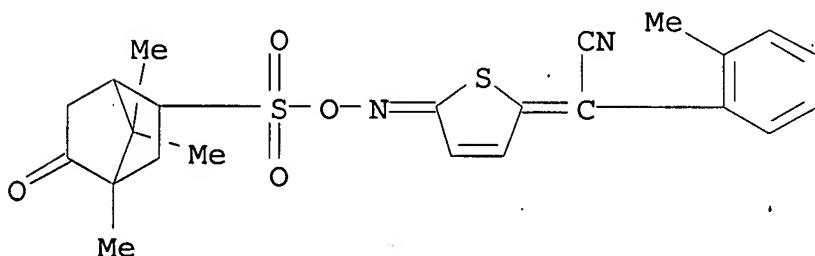
thiophen-2-ylidene) - (2-methylphenyl) acetonitrile;  
 $\alpha$  - (9-camphorsulfonyloxyimino) - 4-methoxy-benzoacetonitrile;  
 $\alpha$  - [ [ [ (4-methoxyphenyl) sulfonyl] oxy] imino] - benzoacetonitrile;  
 4-methoxy- $\alpha$  - [ [ [ (4-methylphenyl) sulfonyl] oxy] imino] -  
 benzoacetonitrile, and wherein the benzotriazole deriv. has general  
 structure II (R3 = H, OH, alkyl, ester, Ph, etc.; R4 = H, halo, OH,  
 alkyl, alkoxy) or III (R6 = H, OH, alkyl, phenyl; R5 = H, halo, OH,  
 alkyl, alkoxy). The compn. provides photoresists generating high  
 resolu. pattern on a metal substrate.

IT 722479-59-6 722479-60-9

(photoresists material and method for pattern formation using  
 same)

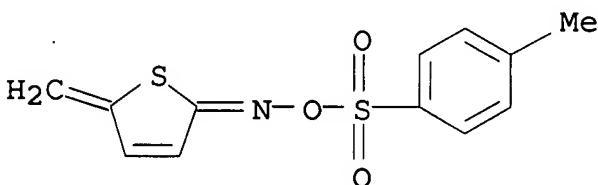
RN 722479-59-6 ZCA

CN Benzeneacetonitrile, 2-methyl- $\alpha$  - [5 - [ [ [ (4,7,7-trimethyl-5-  
 oxobicyclo[2.2.1]hept-2-yl) sulfonyl] oxy] imino] - 2 (5H) - thienylidene] -  
 (9CI) (CA INDEX NAME)



RN 722479-60-9 ZCA

CN 2 (5H) - Thiophenone, 5-methylene-, O - [ (4-methylphenyl) sulfonyl] oxime  
 (9CI) (CA INDEX NAME)



IT 722479-59-6 722479-60-9

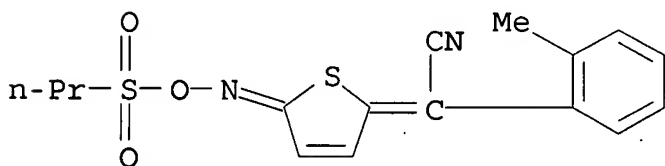
(photoresists material and method for pattern formation using  
 same)

L6 ANSWER 9 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 141:44772 ZCA

TI A new positive-working alkaline developable photoresist based on  
 partially O-tert-butoxycarbonylmethylated-tetra-C-  
 methylcalix[4]resorcinarene and a photoacid generator

AU Iimori, H.; Shibasaki, Y.; Ueda, M.; Ishii, H.  
CS Department of Organic and Polymeric Materials, Graduate School of  
Science and Engineering, Tokyo Institute of Technology, Tokyo,  
152-8552, Japan  
SO Journal of Photopolymer Science and Technology (2003),  
16(5), 685-690  
CODEN: JSTEED; ISSN: 0914-9244  
PB Technical Association of Photopolymers, Japan  
DT Journal  
LA English  
AB A new pos.-working low-mol.-wt. photoresist has been developed. The  
photoresist consisted of the matrix, tetra-C-  
methylcalix[4]resorcinarene (p-t-BM-C4-R) in which the OH groups  
were protected with tert-butoxycarbonylmethyl groups (protecting  
ratio: 27-60%), and a photoacid generator (PAG),  
5-(propylsulfonyloxyimino-5H-thiophen-2-ylidene)-2-  
methylphenylacetonitrile (PTMA). The p-t-BM-C4-R (protecting ratio:  
40%) contg. PTMA (2 wt%) showed a high sensitivity (10 mJ/cm<sup>2</sup>) and a  
contrast 11 after the irradiation with g-line, post-exposure baking at  
120°C at 60 s, and developing with 2.38 wt%  
tetramethylammonium hydroxide aq. soln. (TMAH aq) at 20°C for  
10 s.  
IT 282713-83-1  
(pos.-working alk. developable photoresist based on partially  
O-tert-butoxycarbonylmethylated tetra-C-  
methylcalix[4]resorcinarene)  
RN 282713-83-1 ZCA  
CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-  
[[ (propylsulfonyl)oxy]imino]-2(5H)-thienylidene] - (CA INDEX NAME)



IT 282713-83-1  
(pos.-working alk. developable photoresist based on partially  
O-tert-butoxycarbonylmethylated tetra-C-  
methylcalix[4]resorcinarene)  
RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT  
L6 ANSWER 10 OF 26 ZCA COPYRIGHT 2007 ACS on STN  
AN 140:383110 ZCA  
TI Chemically amplified positive photosensitive resin composition  
IN Nishiwaki, Yoshinori; Makii, Toshimichi

PA Clariant International Ltd., Switz.; Clariant (Japan) K. K.  
 SO PCT Int. Appl., 33 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 2004038506	A1	20040506	WO 2003-JP13233	200310 16

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W: CN, JP, KR, US  
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,  
 IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR  
 EP 1562077 A1 ~~20050810~~ EP 2003-756638  
 200310  
16

<--

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
 PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK  
 CN 1705914 A ~~20051207~~ CN 2003-80101785  
 200310  
16

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US 2005271972 A1 ~~20051208~~ US 2005-532364  
 200504  
20

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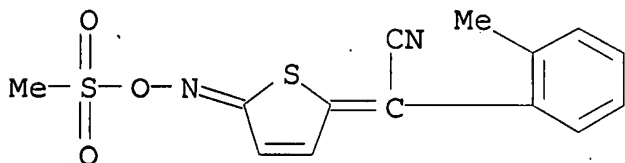
US 7255972 B2 20070814  
 PRAI JP 2002-308089 A 20021023 <--  
 WO 2003-JP13233 W 20031016 <--

AB A chem. amplified pos. photosensitive resin compn. capable of forming thick or extra thick resist patterns, which comprises (A) an alkali-sol. novolac resin, (B) an alkali-sol. acrylic resin, (C) an acetal compd., and (D) an acid generator and which are suitable for the formation of thick resist patterns necessary to the formation of magnetic poles of magnetic heads or bumps. The acetal compd. is preferably a polycondensate comprising repeating units represented by the general formula -O(R)HO(C<sub>2</sub>H<sub>4</sub>O)- [R = satd. alkyl having 1 to 20 carbon atoms; n = 1-10].

IT 210432-74-9, 5-Methylsulfonyloxyimino-5H-thiophene-2-ylidene-2-methylphenylacetonitrile  
 (acid generator; chem. amplified pos. photosensitive resin compn. suitable for magnetic head fabrication and for semiconductor device packaging)

RN 210432-74-9 ZCA

CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-  
[[ (methylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX  
NAME)



IT 210432-74-9, 5-Methylsulfonyloxyimino-5H-thiophene-2-ylidene-  
2-methylphenylacetonitrile  
(acid generator; chem. amplified pos. photosensitive resin compn.  
suitable for magnetic head fabrication and for semiconductor  
device packaging)

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 11 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 140:207466 ZCA

TI Photoacid generators, chemically amplified positive resist  
compositions, and patterning process

IN Maeda, Kazunori; Ohsawa, Youichi; Watanabe, Satoshi

PA Japan

SO U.S. Pat. Appl. Publ., 30 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004033440	A1	20040219	US 2003-636654	20030808
	JP 2004133393	A	20040430	JP 2003-205698	20030804

PRAI JP 2002-233510 A 20020809 <--

OS MARPAT 140:207466

AB Photoacid generators capable of generating 2,4,6-triisopropylbenzenesulfonic acid upon exposure to actinic radiation are suited for use in chem. amplified pos. resist compns. Due to the low diffusion of 2,4,6-triisopropylbenzenesulfonic acid, the compns. have many advantages including improved resoln., improved

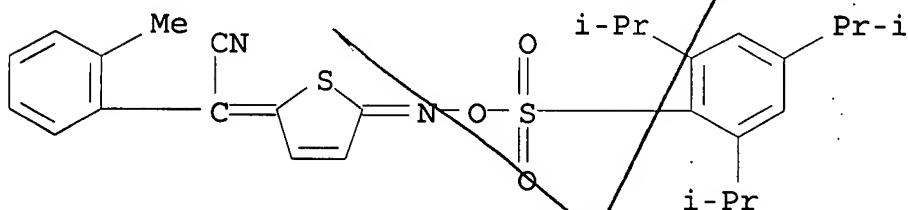
focus latitude, and minimized line width variation or shape degrdn. even on long-term PED.

IT 660845-72-7P

(photoacid generators and chem. amplified pos. resist compns. for patterning process)

RN 660845-72-7 ZCA

CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-[[[2,4,6-tris(1-methylethyl)phenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene] - (9CI). (CA INDEX NAME)



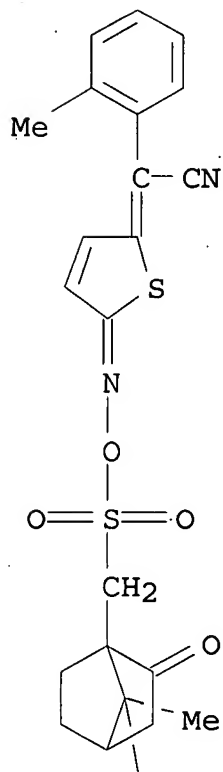
IT 219651-50-0

(photoacid generators and chem. amplified pos. resist compns. for patterning process)

RN 219651-50-0 ZCA

CN Benzeneacetonitrile,  $\alpha$ -[5-[[[(7,7-dimethyl-2-oxobicyclo[2.2.1]hept-1-yl)methyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



- IT 660845-72-7P  
(photoacid generators and chem. amplified pos. resist compns. for patterning process)
- IT 219651-50-0  
(photoacid generators and chem. amplified pos. resist compns. for patterning process)
- L6 ANSWER 12 OF 26 ZCA COPYRIGHT 2007 ACS on STN
- AN 140:102018 ZCA
- TI Photoacid generators for chemically amplified resists and their use in resists and pattern formation
- IN Osawa, Yoichi; Kobayashi, Katsuhiko; Takemura, Katsuya; Tsuchiya, Junji; Maeda, Kazuki

PA Shin-Etsu Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 76 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004004551	A	20040108	JP 2003-27861	20030205
PRAI	JP 2002-80566	A	20020322	<--	
OS	MARPAT 140:102018				
GI					

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The photoacid generators are represented by I,  $pC(EWG):NOSO_2C_6H_4-rR'rOn(CH_2)mMe$ ,  $q[C(EWG):NOSO_2C_6H_4-rR'rOn(CH_2)mMe]_2$ , or II [ $R' = H, F, C1-4$  alkyl, alkoxy;  $R = Cl, R'$ ;  $n = 0, 1$ ;  $m = 3-11$ ;  $r = 0-4$ ;  $EWG =$  cyano, nitro,  $C1-3$  perfluoroalkyl;  $p = C1-10$  alkyl,  $C6-12$  aryl;  $q = C1-10$  alkylene,  $C6-18$  arylene;  $G', G'' = S, CH:CH$ ;  $G'$  and  $G''$  are not  $S$  at the same time;  $G = H, p$ ; two  $G$  may form ring]. Alternatively, the photoacid generators are  $O$ -arylsulfonyloximes and generate long-chain alkylbenzenesulfonic acids or alkoxybenzenesulfonic acids of  $HO_3SC_6H_4-rR'rOn(CH_2)mMe$  ( $R', n, m,$  and  $r$  are same as above) under irradiation with UV, far-UV, electron beam, x-ray, excimer laser,  $\gamma$ -ray, or synchrotron radiation. The claimed chem. amplified (pos.) resists contain the above photoacid generators and resins changing soly. to alkali development solns. by acids. Patterns are formed by applying the resists on substrates, heating, exposing through photomasks by  $\leq 300$  nm-wavelength high-energy beams or electron beams, optionally heating, and developing with solns.

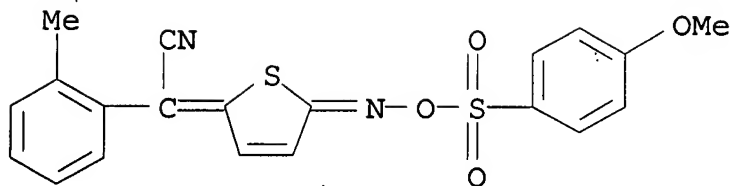
IT 219651-38-4P 219651-50-0P 642460-61-5P  
642460-63-7P

(photoacid generator; photoacid generators for chem. amplified resists and pattern formation with high-energy beams or electron beams)

RN 219651-38-4 ZCA

CN Benzeneacetonitrile,  $\alpha$ -[5-[[[(4-methoxyphenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)

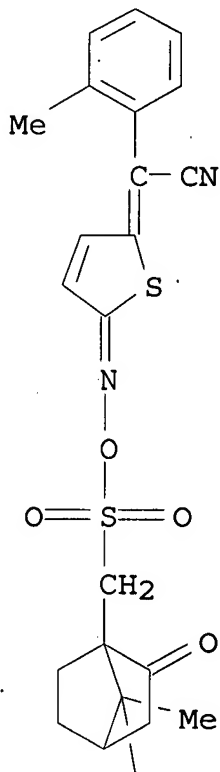




RN 219651-50-0 ZCA

CN Benzeneacetonitrile,  $\alpha$ -[5-[[[(7,7-dimethyl-2-oxobicyclo[2.2.1]hept-1-yl)methyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)

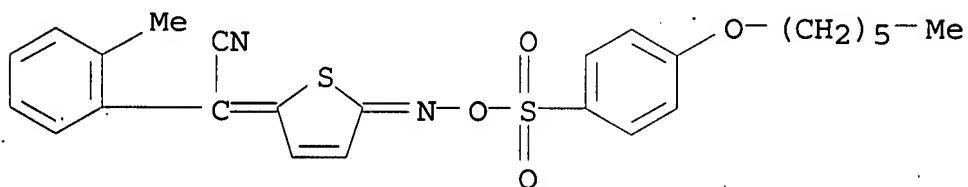
PAGE 1-A



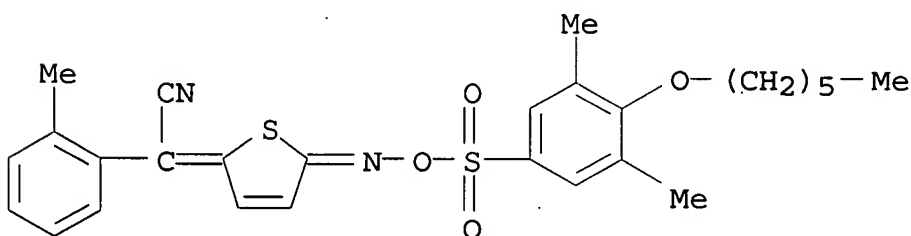
PAGE 2-A

Me

RN 642460-61-5 ZCA

CN Benzeneacetonitrile,  $\alpha$ -[5-[[[4-(hexyloxy)phenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)

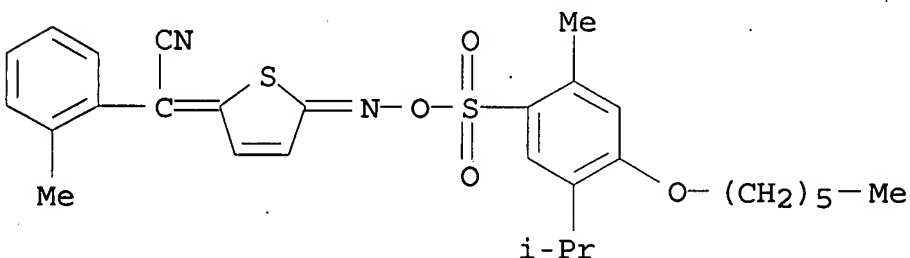
RN 642460-63-7 ZCA

CN Benzeneacetonitrile,  $\alpha$ -[5-[[[4-(hexyloxy)-3,5-dimethylphenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)

IT 642460-65-9P, 642460-68-2P

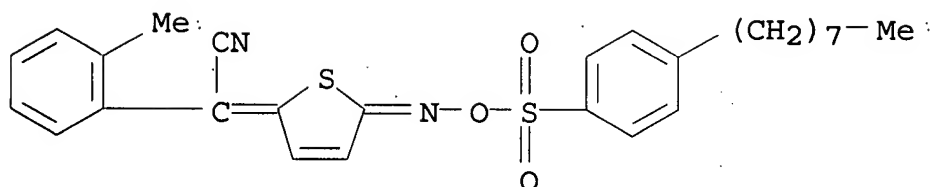
(photoacid generators for chem. amplified resists and pattern formation with high-energy beams or electron beams)

RN 642460-65-9 ZCA

CN Benzeneacetonitrile,  $\alpha$ -[5-[[[4-(hexyloxy)-2-methyl-5-(1-methylethyl)phenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)

RN 642460-68-2 ZCA

CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-[[[4-octylphenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



IT 219651-38-4P 219651-50-0P 642460-61-5P  
642460-63-7P

(photoacid generator; photoacid generators for chem. amplified resists and pattern formation with high-energy beams or electron beams)

IT 642460-65-9P 642460-68-2P

(photoacid generators for chem. amplified resists and pattern formation with high-energy beams or electron beams)

L6 ANSWER 13 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 140:84640 ZCA

TI Chemically amplified positive photoresist compositions with high sensitivity and resolution

IN Nanba, Katsuhiko; Nakanishi, Junji; Uetani, Yasunori

PA Sumitomo Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004004669	A	20040108	JP 2003-85686	200303 26
	TW 262359	B	20060921	TW 2003-92106449	200303 24
	CN 1448793	A	20031015	CN 2003-121330	200303 26
	KR 2004002473	A	20040107	KR 2003-19160	200303 27

PRAI JP 2002-90980 A 20020328 <--

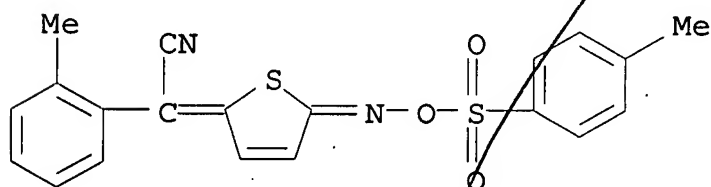
AB The compns. comprise (A) crosslinking agents, (B) acid generators, and (C) resins having acid-dissociable blocking groups, wherein the resins show poor or no soly. to alkali aq. solns. but good soly. after the blocking groups are dissocd. The crosslinking agents may be urea resins.

IT 219651-32-8

(acid generator; chem. amplified pos. photoresists having urea-based crosslinkers with high sensitivity and resoln.)

RN 219651-32-8 ZCA

CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-[[[(4-methylphenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



IT 219651-32-8

(acid generator; chem. amplified pos. photoresists having urea-based crosslinkers with high sensitivity and resoln.)

L6 ANSWER 14 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 140:60322 ZCA

TI A new negative-type photosensitive polymer based on poly(2,6-dihydroxy-1,5-naphthalene), a cross-linker, and a photoacid generator

AU Tsuchiya, Kousuke; Shibasaki, Yuji; Suzuki, Masato; Ueda, Mitsuru  
CS Department of Organic and Polymeric Materials, Tokyo Institute of Technology, Graduate School of Science and Engineering, Tokyo, 152-8552, Japan

SO Journal of Photopolymer Science and Technology (2003), 16(2), 285-286

CODEN: JSTEEW; ISSN: 0914-9244

PB Technical Association of Photopolymers, Japan

DT Journal

LA English

AB Here we report a new neg.-type alk. developable thermally stable and photosensitive polymer based on poly(2,6-dihydroxy-1,5-naphthalene) (PDHN), a crosslinker 4,4'-methylenabis[2,6-bis(hydroxymethyl)phenol] (MBHP), and a photoacid generator (5-propylsulfonyloxyimino-5H-2-ylidene)-(2-methylphenyl) (PTMA).

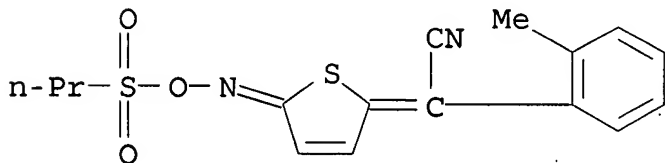
IT 282713-83-1

(neg.-type photosensitive polymer based on poly(2,6-dihydroxy-1,5-

naphthalene), crosslinker, and photoacid generator)

RN 282713-83-1 ZCA

CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-  
[[ (propylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



IT 282713-83-1

(neg.-type photosensitive polymer based on poly(2,6-dihydroxy-1,5-naphthalene), crosslinker, and photoacid generator)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 15 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 140:33561 ZCA

TI Novel photoacid generators for chemically amplified resists

AU Asakura, Toshikage; Yamato, Hitoshi; Matsumoto, Akira; Murer, Peter; Ohwa, Masaki

CS Technology Center Electronic Materials, Coating Effects Segment, Ciba Specialty Chemicals K.K., Amagasaki, 660-0083, Japan

SO Journal of Photopolymer Science and Technology (2003), 16(3), 335-345

CODEN: JSTEED; ISSN: 0914-9244

PB Technical Association of Photopolymers, Japan

DT Journal

LA English

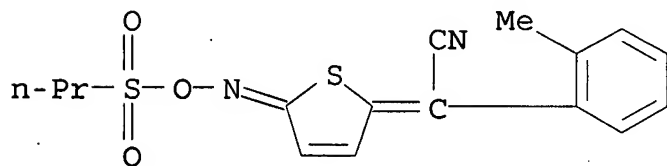
AB Recently the authors developed new class of non-ionic oxime sulfonate PAG. The compds. generate various kinds of sulfonic acids, such as n-propane, n-octane, camphor and p-toluene sulfonic acid under deep-UV exposure and trifluoromethanesulfonic acid under ArF exposure and are applicable for the corresponding chem. amplified (CA) photoresists. The application-relevant properties of the compds. such as soly. in propylene glycol monomethyl ether acetate (PGMEA), Et lactate, Et 3-ethoxypropionate, and 2-heptanone, UV absorption, thermal stability with or without poly(4-hydroxystyrene) (PHS), volatility, performance in model resist formulations were evaluated. In addn., the microlithog. simulation based on the results of DRM results of the trifluoromethanesulfonate was also studied.

IT 282713-83-1

(comparative PAG; lithog. performance of non-ionic oxime sulfonate photoacid generators in chem. amplified photoresists)

RN 282713-83-1 ZCA

CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-  
[[ (propylsulfonyl)oxy]imino]-2(5H)-thienylidene] - (CA INDEX NAME)



IT 282713-83-1

(comparative PAG; lithog. performance of non-ionic oxime  
sulfonate photoacid generators in chem. amplified photoresists)

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 16 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 139:401547 ZCA

TI Photoacid generators and chemically amplified resist compositions  
for patterning process

IN Ohsawa, Youichi; Kobayashi, Katsuhiko; Takemura, Katsuya; Tsuchiya,  
Junji; Maeda, Kazunori

PA Shin-Etsu Chemical Co., Ltd., Japan

SO U.S. Pat. Appl. Publ., 49 pp.

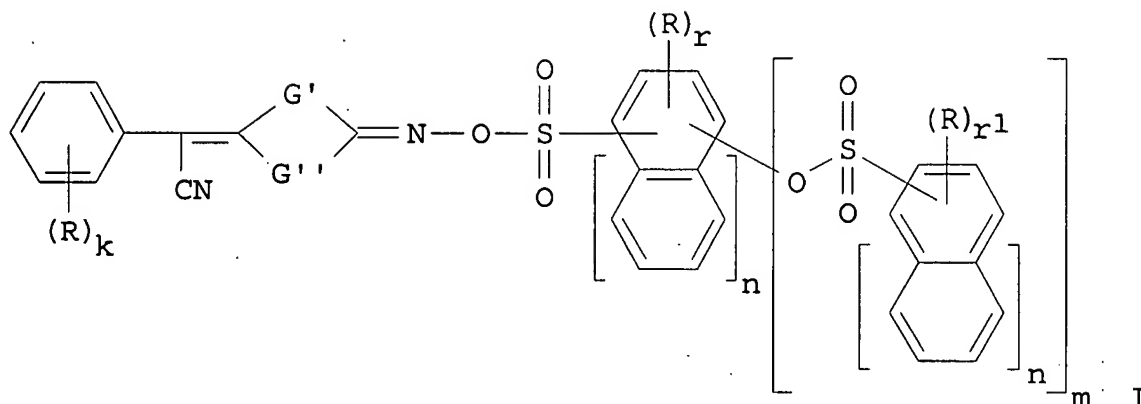
CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003215738	A1	20031120	US 2003-393006	200303 21
	US 6916591	B2	20050712		
	JP 2004004614	A	20040108	JP 2003-71473	200303 17
	KR 2004002467	A	20040107	KR 2003-17699	200303 21
PRAI	JP 2002-80649	A	20020322		
OS	MARPAT 139:401547				
GI					



AB Photoacid generators are provided by O-arylsulfonyl-oxime compds. having general formula I ( $R = H, F, Cl, NO_2, \text{alkyl, alkoxy}$ ;  $n = 0, 1$ ;  $m = 1, 2$ ;  $r = 0-4$ ;  $r1 = 0-5$ ;  $k = 0-4$ ;  $G1, G2 = S, -CH=CH-$ ). Chem. amplified resist compns. comprising the photoacid generators have many advantages including improved resolu., improved focus latitude, minimized line width variation or shape degrdn. even on long-term PED, and improved pattern profile after development. Because of high resolu., the compns. are suited for microfabrication, esp. by deep UV lithog.

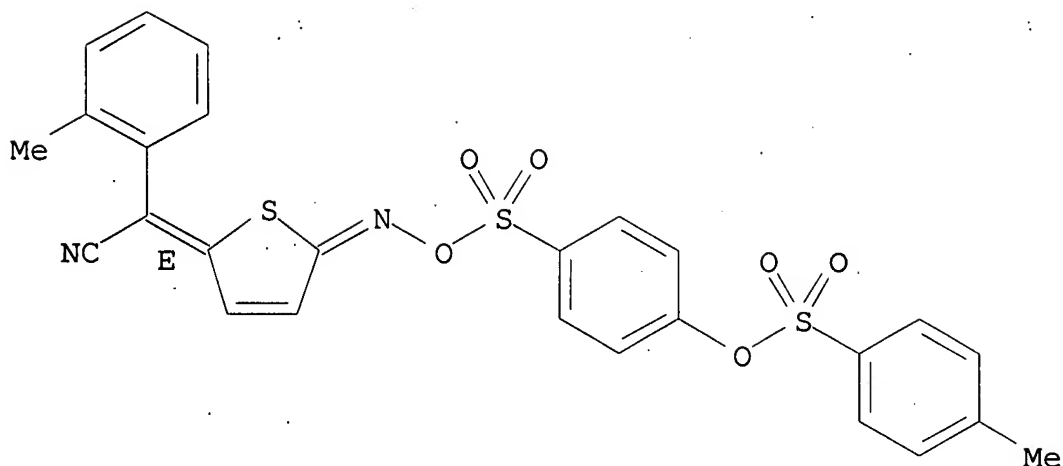
IT 625838-21-3P 625838-22-4P

(photoacid generator; photoacid generators and chem. amplified resist compns. for patterning process)

RN 625838-21-3 ZCA

CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-[[[4-[[4-methylphenyl)sulfonyl]oxy]phenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene]-, ( $\alpha E$ )-(9CI) (CA INDEX NAME)

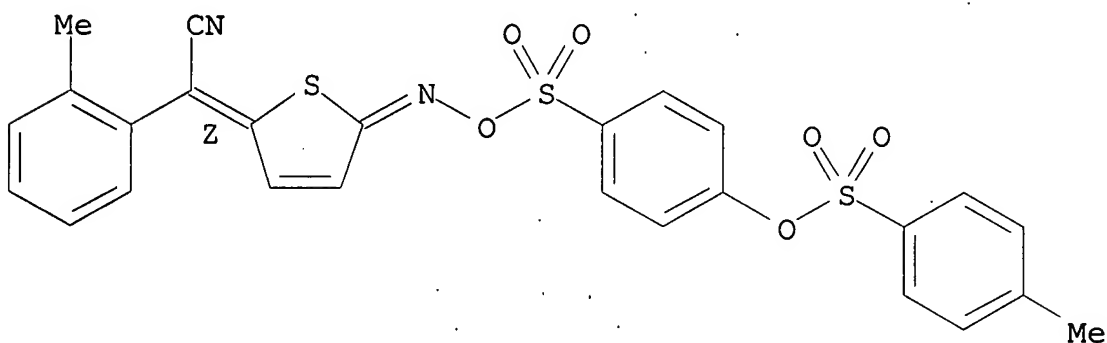
Double bond geometry as described by E or Z.



RN 625838-22-4 ZCA

CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-[[[4-[[4-methylphenyl)sulfonyl]oxy]phenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-, ( $\alpha$ Z)- (9CI) (CA INDEX NAME)

Double bond geometry as described by E or Z.



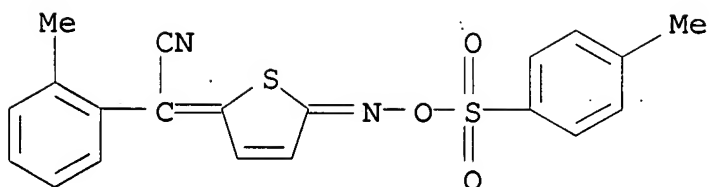
IT 219651-32-8 625849-55-0

(photoacid generator; photoacid generators and chem. amplified resist compns. for patterning process)

RN 219651-32-8 ZCA

CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-[[[4-methylphenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)

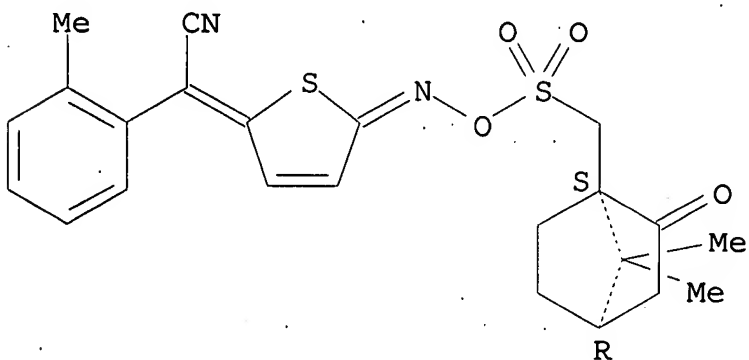




RN 625849-55-0 ZCA

CN Benzeneacetonitrile,  $\alpha$ -[5-[[[[(1S,4R)-7,7-dimethyl-2-oxobicyclo[2.2.1]hept-1-yl]methyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry unknown.



IT 625838-25-7P 625838-28-0P 625838-31-5P

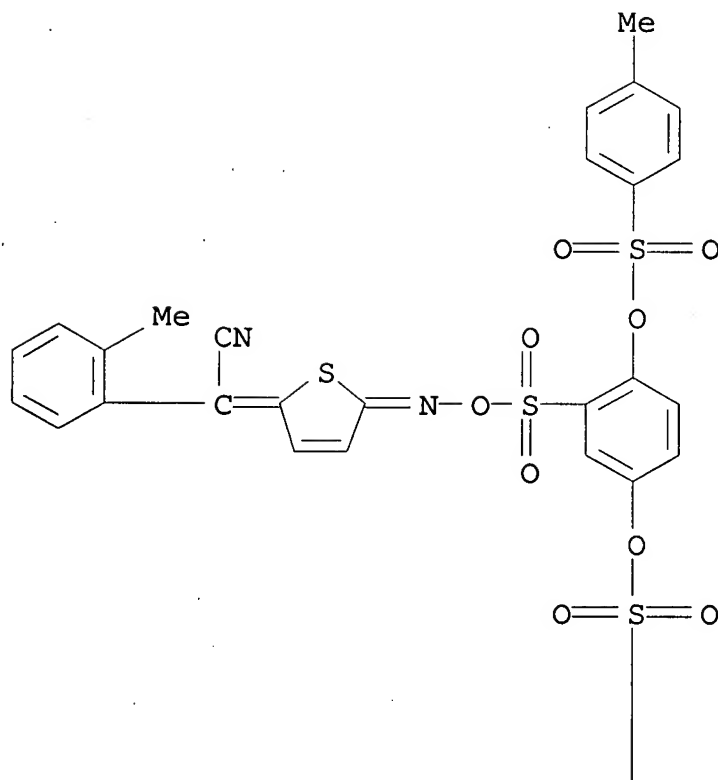
625838-34-8P 625838-37-1P 625838-40-6P

(photoacid generators and chem. amplified resist compns. for  
patterning process)

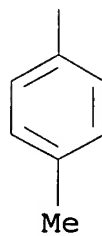
RN 625838-25-7 ZCA

CN Benzeneacetonitrile,  $\alpha$ -[5-[[[2,5-bis[[4-methylphenyl]sulfonyl]oxy]phenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)

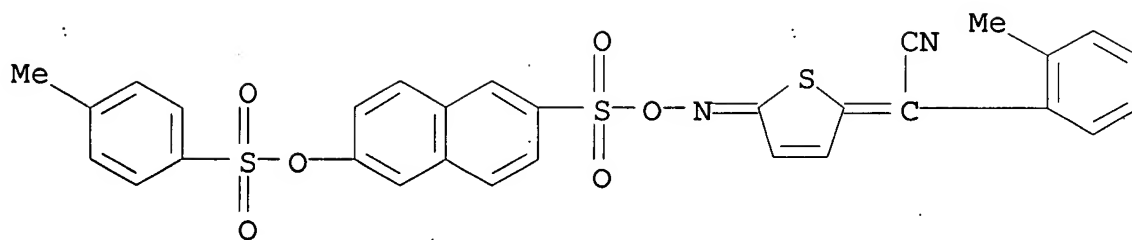
PAGE 1-A



PAGE 2-A



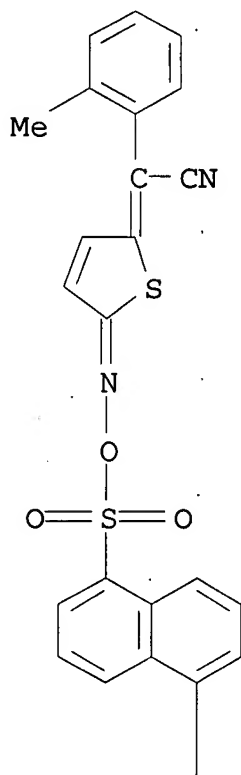
RN 625838-28-0 ZCA  
 CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-[[[6-[[[4-methylphenyl)sulfonyl]oxy]-2-naphthalenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



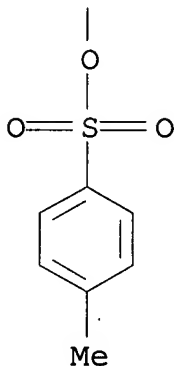
RN 625838-31-5 ZCA

CN Benzeneacetonitrile, 2-methyl-α-[5-[[[5-[[4-methylphenyl)sulfonyl]oxy]-1-naphthalenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)

PAGE 1-A

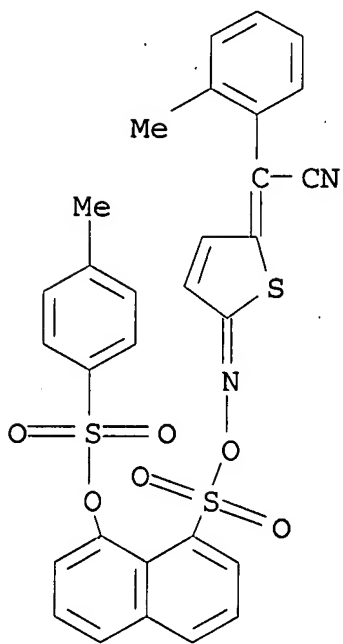


PAGE 2-A



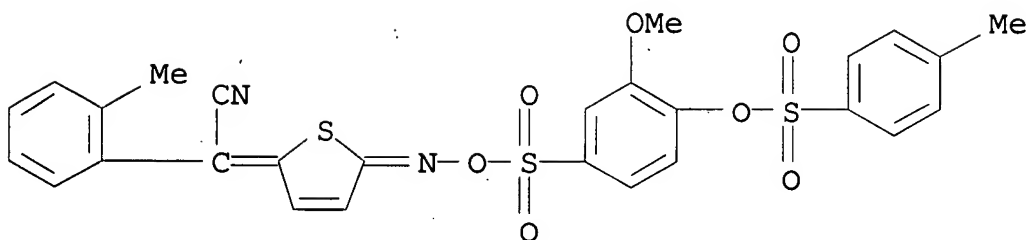
RN 625838-34-8 ZCA

CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-[[[8-[[4-methylphenyl)sulfonyl]oxy]-1-naphthalenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



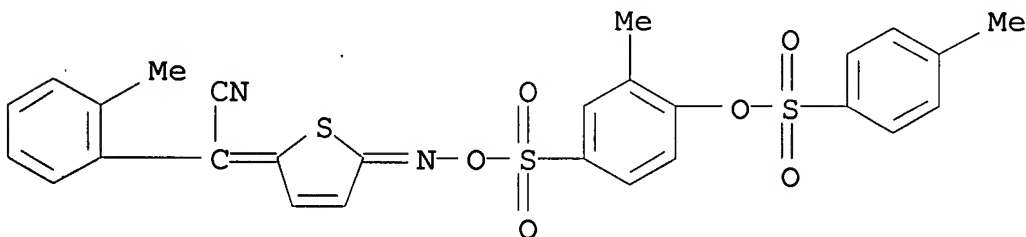
RN 625838-37-1 ZCA

CN Benzeneacetonitrile,  $\alpha$ -[5-[[[3-methoxy-4-[[4-methylphenyl)sulfonyl]oxy]phenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)



RN 625838-40-6 ZCA

CN Benzeneacetonitrile, 2-methyl-α-[5-[[[3-methyl-4-[[4-methylphenyl)sulfonyl]oxy]phenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



IT 625838-21-3P 625838-22-4P

(photoacid generator; photoacid generators and chem. amplified resist compns. for patterning process)

IT 219651-32-8 625849-55-0

(photoacid generator; photoacid generators and chem. amplified resist compns. for patterning process)

IT 625838-25-7P 625838-28-0P 625838-31-5P

625838-34-8P 625838-37-1P 625838-40-6P

(photoacid generators and chem. amplified resist compns. for patterning process)

RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 17 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 139:171281 ZCA

TI Sulfonate derivatives and the use as latent acids for photoresist

IN Matsumoto, Akira; Yamato, Hitoshi; Asakura, Toshikage; Murer, Peter

PA Ciba Specialty Chemicals Holding Inc., Switz.

SO PCT Int. Appl., 118 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.

KIND DATE

APPLICATION NO.

DATE

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PI   WO 2003067332      A2      20030814      WO 2003-EP821
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WO 2003067332      A3      20031224
W:   AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
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     GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,
     LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,
     NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ,
     TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW:  GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
     BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
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     SN, TD, TG
CA 2474532      A1      20030814      CA 2003-2474532
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                                           28
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AU 2003206787      A1      20030902      AU 2003-206787
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EP 1472576      A2      20041103      EP 2003-704479
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BR 2003007501      A      20041207      BR 2003-7501
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US 2005153244      A1      20050714      US 2003-495710
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MX 2004PA06581

A

20041004

MX 2004-PA6581

200407  
05

PRAI EP 2002-405082

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20020206 &lt;--

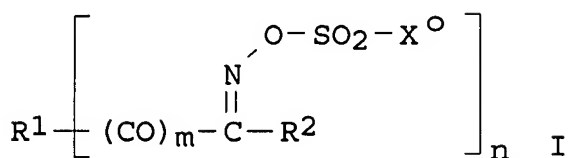
WO 2003-EP821

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20030128 &lt;--

OS MARPAT 139:171281

GI



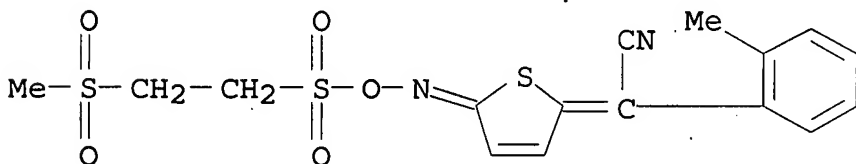
AB Chem. amplified photoresist compns. comprises, (a) a compd. which cures upon the action of an acid or a compd. whose soly. is increased upon the action of an acid; and (b) a compd. of the formula I, (n = 1, 2; m = 0, 1; X<sup>0</sup> = -[CH<sub>2</sub>]<sub>h</sub>-X, -CH=CH<sub>2</sub>; when n = 1, R<sub>1</sub> = Ph, naphthyl, anthracyl, phenanthryl, heteroaryl; when n = 2, R<sub>1</sub> = phenylene, naphthylene; R<sub>2</sub> has one of the meanings of R<sub>1</sub>; give high resoln. with good resist profile.

IT 574750-80-4P 574750-82-6P

(sulfonate derivs. use as latent acids for photoresist)

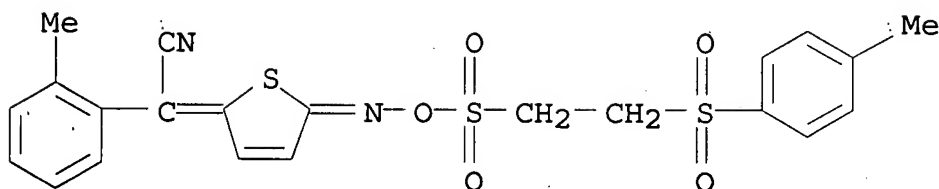
RN 574750-80-4 ZCA

CN Benzeneacetonitrile, 2-methyl-α-[5-[[[2-(methylsulfonyl)ethyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]- (9CI)  
(CA INDEX NAME)



RN 574750-82-6 ZCA

CN Benzeneacetonitrile, 2-methyl-α-[5-[[[2-[(4-methylphenyl)sulfonyl]ethyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



IT 574750-80-4P 574750-82-6P

(sulfonate derivs. use as latent acids for photoresist)

L6 ANSWER 18 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 139:44235 ZCA

TI Chemically amplified positively working photoresist composition containing radiation-sensitive acid-generating agent

IN Nakanishi, Junji; Nanba, Katsuhiko

PA Sumitomo Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003177536	A	20030627	JP 2001-376908	20011211
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	JP 3918542	B2	20070523		
	CN 1424625	A	20030618	CN 2002-154063	20021209
				<--	

PRAI JP 2001-376908 A 20011211 <--

OS MARPAT 139:44235

AB The compn. contains (A) a radiation-sensitive acid-generating agent, (B) a resin water-insol. or difficult to be dissolved in water, which can converted into water-sol. by an acid, (C) a basic compd., and (D) a compd. having molar absorption coeff. 100-50,000 at wavelength 300-450 nm. The compn. is suitable for photolithog. under high-energy radiation, e.g., UV, excimer laser, electron beam, x ray, etc.

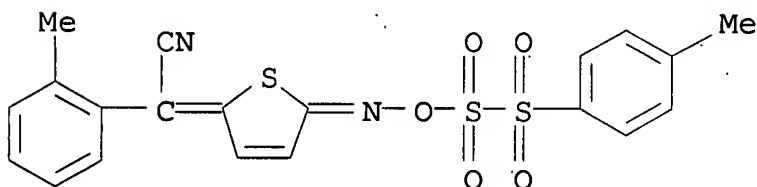
IT 544442-80-0

(chem. amplified pos. working photoresist compn. contg. water-insol. resin and radiation-sensitive acid-generating agent)

RN 544442-80-0 ZCA



CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-[[[(4-methylphenyl)disulfonyl]oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



IT 544442-80-0

(chem. amplified pos. working photoresist compn. contg.  
water-insol. resin and radiation-sensitive acid-generating agent)

L6 ANSWER 19 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 138:328995 ZCA

TI Chemically-amplified positive-working resist compositions containing quaternary ammonium compounds as quenchers

IN Nakanishi, Junji; Nanba, Katsuhiko

PA Sumitomo Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

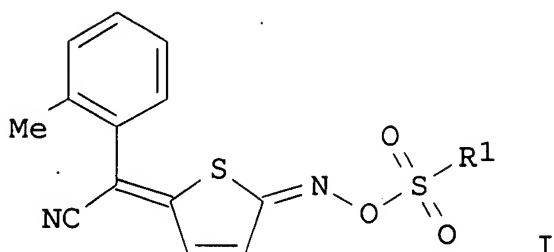
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003122013	A	20030425	JP 2001-321711	20011019
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	JP 3849486	B2	20061122		
	TW 257033	B	20060621	TW 2002-91123414	20021011
				<--	
	CN 1412619	A	20030423	CN 2002-145886	20021016
				<--	
	US 2004076902	A1	20040422	US 2002-271754	20021017
				<--	
PRAI	JP 2001-321711	A	20011019	<--	

OS MARPAT 138:328995

GI



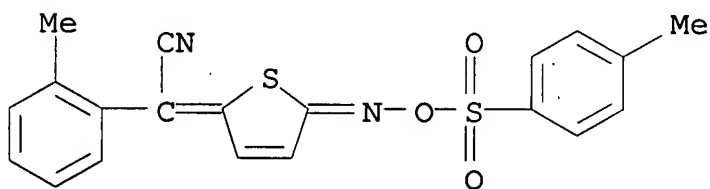
AB The compns., which show high resolu. and high sensitivity, contain (A) thiophene compds. I (R1 = hydrocarbyl which may have O- or N-contg. substituent or halo), (B) resins which are insol. or slightly-sol. in alk. soln. but become alkali-sol. upon action of acids, and (C) quaternary ammonium salts.

IT 219651-32-8

(photoacid generator; chem.-amplified pos.-working resist compns. contg. quaternary ammonium compds. as quenchers)

RN 219651-32-8 ZCA

CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-[[[(4-methylphenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



IT 219651-32-8

(photoacid generator; chem.-amplified pos.-working resist compns. contg. quaternary ammonium compds. as quenchers)

L6 ANSWER 20 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 138:161088 ZCA

TI Chemical amplification-type positive-working resist composition for liquid crystal display

IN Nitta, Kazuyuki; Kato, Tetsuya; Aoki, Tomosaburo

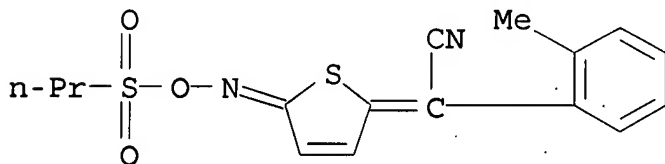
PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003050460	A	20030221	JP 2001-238039	20010806
	TW 594391	B	20040621	TW 2002-91116898	20020729
PRAI	JP 2001-238039	A	20010806	<--	
OS	MARPAT 138:161088				
AB	The compn. contains (A) an alkali-sol. resin comprising a novolak resin whose soly. to 2.38 wt.% tetramethylammonium hydroxide aq. soln. is 375-100 Å/s, (B) a compd. generating an acid by radiation, and (C) a crosslinkable polyvinyl ether dissolved in an org. solvent. Resist pattern is formed by (1) coating the compn. on a glass substrate and drying, (2) exposing through a mask pattern and heating, and (3) developing with an alk. developer. The compn. shows high sensitivity, resoln., and loss of the film is prevented.				
IT	282713-83-1 (acid generator; chem. amplification-type resist compn. contg. novolac resin, acid generator, and crosslinkable polyvinyl ether)				
RN	282713-83-1 ZCA				
CN	Benzeneacetonitrile, 2-methyl-α-[5- [[ (propylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)				



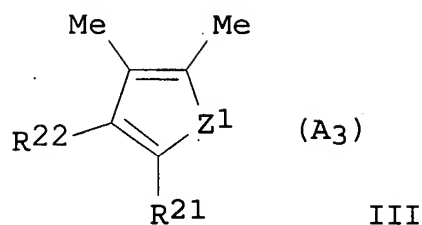
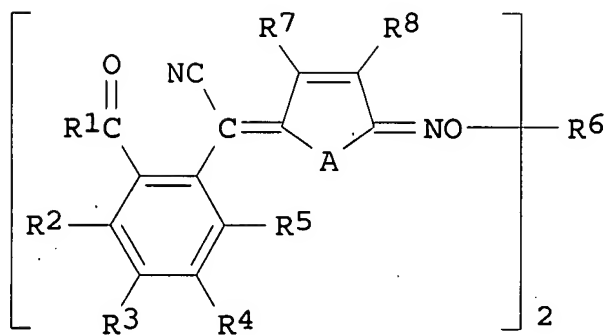
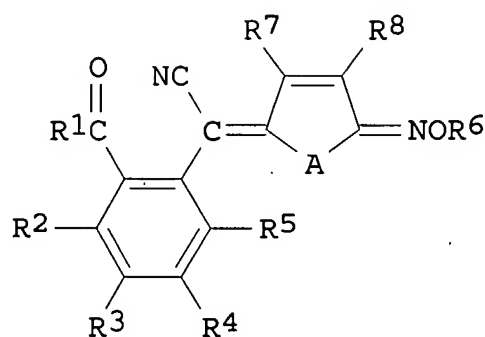
IT 282713-83-1  
(acid generator; chem. amplification-type resist compn. contg. novolac resin, acid generator, and crosslinkable polyvinyl ether)

L6 ANSWER 21 OF 26 ZCA COPYRIGHT 2007 ACS on STN  
AN 138:31029 ZCA  
TI Substituted oxime derivatives as photolabile acid generators in chemically-amplified photoresist compositions  
IN Matsumoto, Akira; Yamato, Hitoshi; Asakura, Toshikage; Ohwa, Masaki; Murer, Peter

PA Ciba Specialty Chemicals Holding Inc., Switz.  
 SO PCT Int. Appl., 66 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002098870	A1	20021212	WO 2002-EP5667	20020523
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AU 2002304646	A1	20021216	AU 2002-304646	20020523
EP 1392675	A1	20040303	EP 2002-732733	20020523
EP 1392675	B1	20050209		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
CN 1512990	A	20040714	CN 2002-810931	20020523
JP 2005504013	T	20050210	JP 2003-501993	20020523
AT 288907	T	20050215	AT 2002-732733	20020523
US 2004209186	A1	20041021	US 2003-478963	200311

US 7026094 B2 20060411  
 PRAI EP 2001-810533 A 20010601 <--  
 WO 2002-EP5667 W 20020523 <--  
 OS MARPAT 138:31029  
 GI



AB Disclosed are new oxime sulfonate compds. of the formula I and II (R1 = C1-C12-alkyl, C1-C4-haloalkyl, H, OR9, NR10R11, SR12, unsubstituted or substituted by OH phenol, C1-C18-alkyl, halogen and/or C1-C12-alkoxy; R2, R3, R4, R5 = H, C1-C12-alkyl; R6 = C1-C18-alkylsulfonyl, phenyl-C1-C3-alkylsulfonyl or phenylsulfonyl; R'6 = phenylenedisulfonyl, diphenylenedisulfonyl; R7, R8, R9 = H, C1-C6-alkyl; R10, R11 = H, C1-C18-alkyl; R12 = H, Ph, C1-C18-alkyl; A = S, O, -Z=C(R21)-, phenyl-R21R22, or a group of formula III (R21, R22 are same as R7; Z = CR22, N; Z1 = CR22, N, CH2, S, O; and as further defined in the claims)) which particularly suitable as photo-latent acids in chem.-amplified photoresist compns. Chem. amplified photoresist compns. comprising oxime derivs. of the

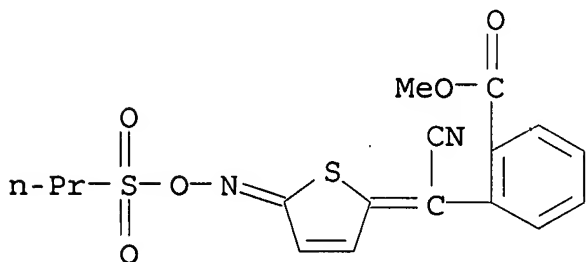
present invention are thermally stable, even at high bake temps. during processing and provide high photospeed.

IT 477962-01-9P 477962-03-1P 477962-05-3P  
477962-07-5P 477962-08-6P 477962-10-0P  
477962-12-2P

(photolabile acid generator; substituted oxime derivs. as photolabile acid generators in chem.-amplified photoresist compns.)

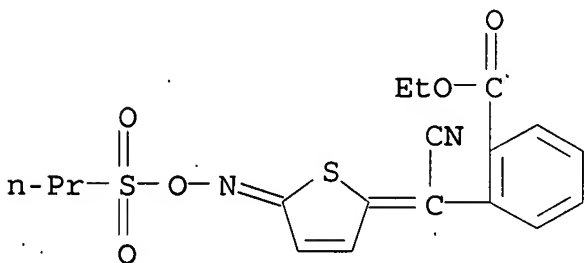
RN 477962-01-9 ZCA

CN Benzoic acid, 2-[cyano[5-[[propylsulfonyl]oxy]imino]-2(5H)-thienylidene]methyl]-, methyl ester (9CI) (CA INDEX NAME)



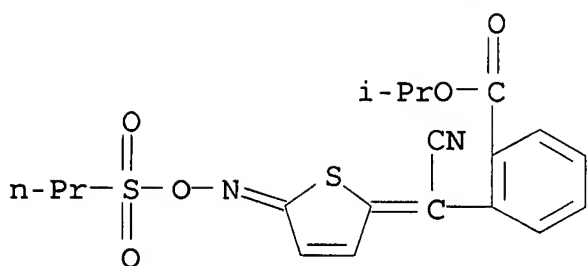
RN 477962-03-1 ZCA

CN Benzoic acid, 2-[cyano[5-[[propylsulfonyl]oxy]imino]-2(5H)-thienylidene]methyl]-, ethyl ester (9CI) (CA INDEX NAME)



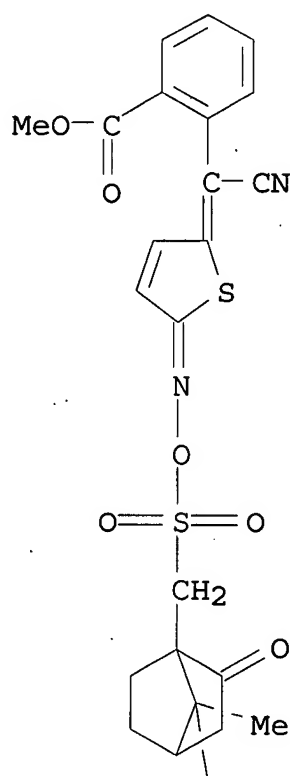
RN 477962-05-3 ZCA

CN Benzoic acid, 2-[cyano[5-[[propylsulfonyl]oxy]imino]-2(5H)-thienylidene]methyl]-, 1-methylethyl ester (9CI) (CA INDEX NAME)



RN 477962-07-5 ZCA  
 CN Benzoic acid, 2-[cyano[5-[[[(7,7-dimethyl-2-oxobicyclo[2.2.1]hept-1-yl)methyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]methyl]-, methyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

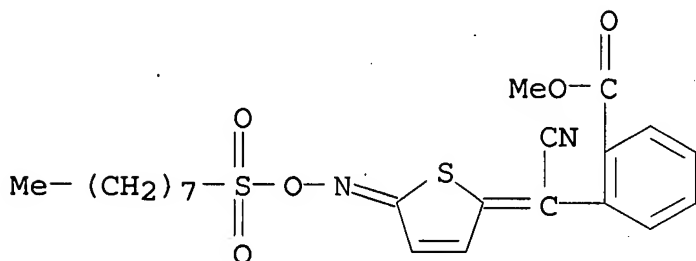


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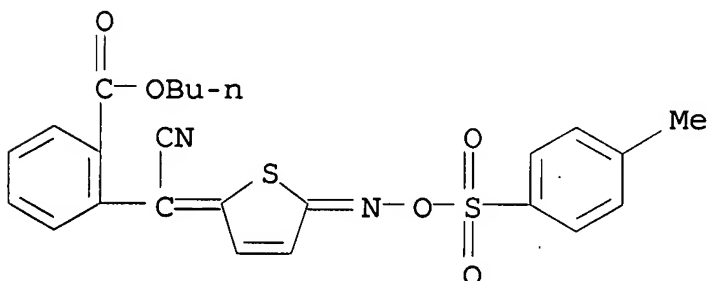
RN 477962-08-6 ZCA

CN Benzoic acid, 2-[cyano[5-[[[(octylsulfonyl)oxy]imino]-2(5H)-thienylidene]methyl]-, methyl ester (9CI) (CA INDEX NAME)



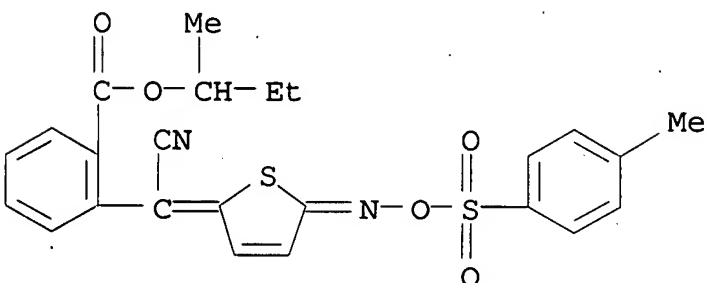
RN 477962-10-0 ZCA

CN Benzoic acid, 2-[cyano[5-[[[(4-methylphenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene]methyl]-, butyl ester (9CI) (CA INDEX NAME)



RN 477962-12-2 ZCA

CN Benzoic acid, 2-[cyano[5-[[[(4-methylphenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene]methyl]-, 1-methylpropyl ester (9CI) (CA INDEX NAME)



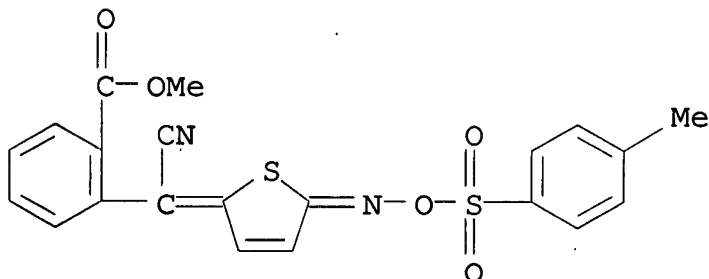


IT 477962-63-3P

(substituted oxime derivs. as photol latent acid generators in chem.-amplified photoresist compns.)

RN 477962-63-3 ZCA

CN Benzoic acid, 2-[cyano[5-[[[(4-methylphenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene]methyl]-, methyl ester (9CI) (CA INDEX NAME)



IT 477962-01-9P 477962-03-1P 477962-05-3P

477962-07-5P 477962-08-6P 477962-10-0P

477962-12-2P

(photol latent acid generator; substituted oxime derivs. as photol latent acid generators in chem.-amplified photoresist compns.)

IT 477962-63-3P

(substituted oxime derivs. as photol latent acid generators in chem.-amplified photoresist compns.)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 22 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 137:101421 ZCA

TI Radiation-sensitive resin compositions for chemically amplified deep UV resists and electron-beam resists

IN Suzuki, Aki; Niwata, Koichi; Yokoyama, Kenichi; Kobayashi, Eiichi

PA JSR Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 23 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002202603	A	20020719	JP 2000-340798	20001108

&lt;--

PRAI JP 2000-323160 A 20001023 <--  
OS MARPAT 137:101421  
GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

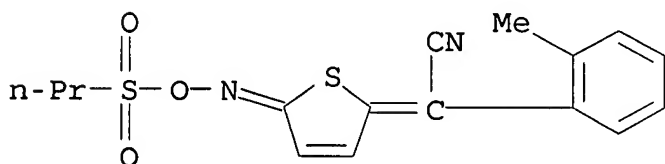
AB The compns. having high sensitivity to KrF or ArF excimer lasers, electron beams, etc., contain (A) radiation-sensitive acid generators I and/or II (R1, R2 = C1-10 linear, branched, or cyclic alkyl, C1-10 linear, branched, or cyclic fluoroalkyl, C6-11 aryl which may be substituted with F) and (B) resins contg. repeating units of acetalated styrene derivs. such as p-(1-ethoxyethoxy)styrenes and p-hydroxystyrene. The compns. give sharp patterns with suppressed nanoedge roughness.

IT 282713-83-1

(photoacid generator; radiation-sensitive resin compns. for chem. amplified deep UV resists and EB resists)

RN 282713-83-1 ZCA

CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-  
[[ (propylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



IT 282713-83-1

(photoacid generator; radiation-sensitive resin compns. for chem. amplified deep UV resists and EB resists)

L6 ANSWER 23 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 136:110027 ZCA

TI Novel photoacid generators for chemically amplified resists with g-line, i-line, and DUV exposure

AU Asakura, Toshikage; Yamato, Hitoshi; Matsumoto, Akira; Ohwa, Masaki  
CS Technology Center Imaging, Additives Division, Ciba Specialty Chemicals K.K., Japan

SO Proceedings of SPIE-The International Society for Optical Engineering (2001), 4345(Pt. 1, Advances in Resist Technology and Processing XVIII), 484-493  
CODEN: PSISDG; ISSN: 0277-786X

PB SPIE-The International Society for Optical Engineering  
DT Journal

LA English

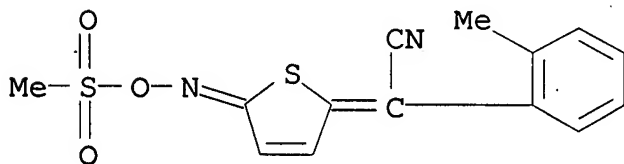
AB A new class of compds., (5-alkylsulfonyloxyimino-5H-thiophen-2-ylidene)-2-methylphenyl-acetonitriles, characterized as non-ionic and halogen-free photoacid generators (PAG's) was developed. The compds. generate various kinds of sulfonic acids, such as methane, n-propane and camphor sulfonic acid under the g-line (436 nm), i-line (365 nm) and Deep UV (DUV, 248 nm or shorter) exposure and are applicable for chem. amplified (CA) photoresists. The application-relevant properties of the compds. such as soly. in propylene glycol monomethyl ether acetate (PGMEA), UV absorption, thermal stability with or without poly(4-hydroxystyrene), storage stability in a neat form, sensitivity in some model resist formulations and dissoln. inhibition efficiency during development process were evaluated. The compds. exhibit enough soly. in PGMEA, red-shifted UV absorption ( $\lambda_{\text{max}}$ : 405 nm), good thermal stability up to 140 C in a phenolic matrix, effective acid generation in terms of quantum yield in an acetonitrile soln. and high sensitivity in neg. tone and pos. tone CA resist formulations, such as tert-Bu ester type and t-BOC type formulations, with g-line, i-line and DUV exposure. The photochem. decompn. reaction of the compd. was also studied. Addnl. a scanning electron microscope (SEM) photog. as an application example of microlithog. by the CA neg. tone resist with the PAG is presented.

IT 210432-74-9 219651-50-0 282713-83-1

(non-ionic and halogen-free photoacid generator for chem. amplified photoresists with g-line, i-line, and DUV exposure)

RN 210432-74-9 ZCA

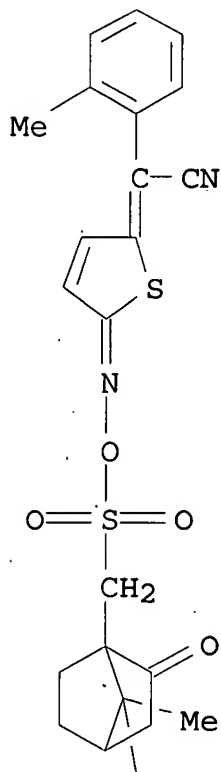
CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-[[[(methylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



RN 219651-50-0 ZCA

CN Benzeneacetonitrile,  $\alpha$ -[5-[[[(7,7-dimethyl-2-oxobicyclo[2.2.1]hept-1-yl)methyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)

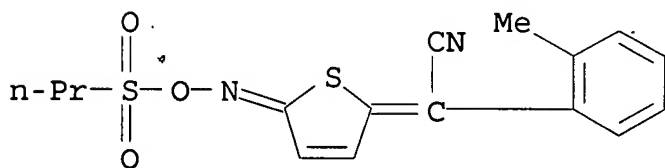
PAGE 1-A



PAGE 2-A



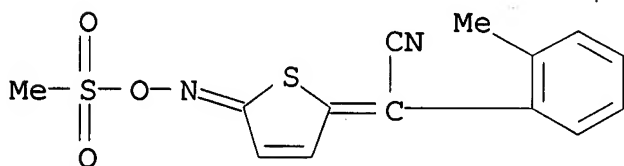
RN 282713-83-1 ZCA  
 CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-  
 [[(propylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)



IT 210432-74-9 219651-50-0 282713-83-1  
 (non-ionic and halogen-free photoacid generator for chem.)

amplified photoresists with g-line, i-line, and DUV exposure)  
 RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 24 OF 26 ZCA COPYRIGHT 2007 ACS on STN  
 AN 133:288704 ZCA  
 TI Novel photoacid generators  
 AU Asakura, Toshikage; Yamato, Hitoshi; Ohwa, Masaki  
 CS Technology Center Imaging, Additives Division, Ciba Specialty  
 Chemicals K.K. Japan, Takarazuka, 665-8666, Japan  
 SO Journal of Photopolymer Science and Technology (2000),  
 13(2), 223-230  
 CODEN: JSTEED; ISSN: 0914-9244  
 PB Technical Association of Photopolymers, Japan  
 DT Journal  
 LA English  
 AB A new class of compds. which are nonionic and halogen-free photo  
 acid generators applicable for g-line, i-line and D-UV photoresists  
 is reported. The compds. exhibit high soly. in PGMEA, thermal  
 stability in a phenolic polymer matrix up to 140°, storage  
 stability <40° >1 yr, red-shifted absorption profile reaching  
 to 490 nm, effective acid generation in terms of quantum yield and  
 high sensitivity in resist formulations with various exposure  
 wavelength. An application example of the new photoacid generator  
 for chem. amplified neg. resist is presented.  
 IT 210432-74-9, 5-Methylsulfonyloxyimino-5H-thiophene-2-ylidene-  
 2-methylphenyl acetonitrile  
 (novel non-ionic and halogen-free photoacid generators for g-line  
 and i-line and D-UV photoresists)  
 RN 210432-74-9 ZCA  
 CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-  
 [(methylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX  
 NAME)



IT 210432-74-9, 5-Methylsulfonyloxyimino-5H-thiophene-2-ylidene-  
 2-methylphenyl acetonitrile  
 (novel non-ionic and halogen-free photoacid generators for g-line  
 and i-line and D-UV photoresists)  
 RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 25 OF 26 ZCA COPYRIGHT 2007 ACS on STN  
 AN 133:230461 ZCA  
 TI Oxime derivatives and the use thereof as photoinitiators  
 IN Kura, Hisatoshi; Yamato, Hitoshi; Ohwa, Masaki; Dietliker, Kurt  
 PA Ciba Specialty Chemicals Holding Inc., Switz.  
 SO PCT Int. Appl., 84 pp.  
 CODEN: PIXXD2

DT Patent  
 LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000052530	A1	20000908	WO 2000-EP1404	200002 21
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1163553	A1	20011219	EP 2000-920439	200002 21
EP 1163553	B1	20060614		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY				
JP 2002538241	T	20021112	JP 2000-602686	200002 21
EP 1635220	A2	20060315	EP 2005-111899	200002 21
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
AT 330254	T	20060715	AT 2000-920439	200002 21
US 6806024	B1	20041019	US 2001-914433	

200108

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PRAI EP 1999-810180 A 19990303 <--  
EP 2000-920439 A3 20000221 <--  
WO 2000-EP1404 W 20000221 <--  
OS MARPAT 133:230461  
GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

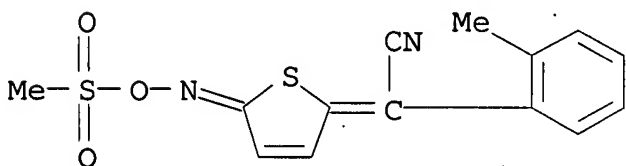
AB This patent disclosed radically photopolymerizable compns. suitable for prepn. of color filter systems, comprising at least one ethylenically unsatd. photopolymerizable compd., at least one compd. as photoinitiator of formulas I, II, III, IV, V, and/or IV (m = 0, 1; n = 0, 1, 2 or 3; p = 1, 2; R1 = Ph, naphthyl, anthracyl or phenanthryl, heteroaryl radical, C2-C12 alkenyl, C4-C8 cycloalkenyl, or C6-C12 bicycloalkenyl; R1' = C2-C12 alkylene, or phenylene; R2 has one of the meanings of R1 or is phenyl; R3 is C1-C18 alkylsulfonyl, or phenyl-C1-C3 alkylsulfonyl if x = 1, R3 is for example C2-C12 alkylenedisulfonyl if x is 2; R4, R5 = H, halogen, or C1-C8 alkyl; R6, R7, R8 = H, R26Y-, or phenyl; R9 inter alia is C5-C8cycloalkyl, or phenyl; A = -S-, -O-, or -NR10-; Q = C1-C8-alkylene optionally interrupted by -O-; X = -O- or -NR9-; R10 = H, or phenyl), and at least one coinitiator.

IT 210432-74-9

(radically photopolymerizable compn. contg.)

RN 210432-74-9 ZCA

CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-  
[[ (methylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX  
NAME)



IT 210432-74-9

(radically photopolymerizable compn. contg.)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 26 OF 26 ZCA COPYRIGHT 2007 ACS on STN

AN 130:117342 ZCA  
 TI New oxime sulfonates and use thereof as latent sulfonic acids for photoresists  
 IN Yamato, Hitoshi; Bleier, Hartmut; Birbaum, Jean-Luc; Kunz, Martin; Dietliker, Kurt; De Leo, Christoph; Asakura, Toshikage  
 PA Ciba Specialty Chemicals Holding Inc., Switz.  
 SO PCT Int. Appl., 64 pp.  
 CODEN: PIXXD2

DT Patent  
 LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9901429	A1	19990114	WO 1998-EP3750	19980619
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
TW 550439	B	20030901	TW 1998-87108592	19980602
AU 9886281	A	19990125	AU 1998-86281	19980619
EP 993445	A1	20000419	EP 1998-937513	19980619
EP 993445	B1	20020828		
R: CH, DE, FR, GB, LI				
JP 2002508774	T	20020319	JP 1999-506240	19980619
US 6004724	A	19991221	US 1998-104676	19980625



PRAI EP 1997-810422 A 19970701 <--  
 WO 1998-EP3750 W 19980619 <--  
 OS MARPAT 130:117342  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

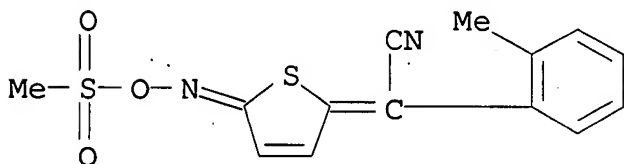
AB New oxime sulfonates of formula I or II, wherein m is 0 or 1; x is 1 or 2; R1 is Ph which is unsubstituted or substituted or R1 is a heteroaryl radical that is unsubstituted or substituted or, if m is 0, R1 addnl. is C2-6 alkoxy carbonyl, phenoxycarbonyl, or CN; R2 has one of the meanings given for R1; n is 1 or 2; R3 is C1-18 alkyl; R4 and R5 are hydrogen, halogen, C1-6 alkyl; R6, when x is 1, has one of the meanings given for R3 and, when x is 2, is C2-12 alkylene or phenylene; R7 is C2-12 alkylene or phenylene; A is S, O, NR8, ZCR9, III, IV, or V; R8 is hydrogen or phenyl; R9 and R10 have one of the meanings given for R4, are useful as latent sulfonic acids, esp. in photoresist applications.

IT 210432-74-9P 219650-82-5P 219651-13-5P  
 219651-16-8P 219651-18-0P 219651-19-1P  
 219651-20-4P 219651-22-6P 219651-24-8P  
 219651-26-0P 219651-28-2P 219651-30-6P  
 219651-32-8P 219651-34-0P 219651-36-2P  
 219651-37-3P 219651-38-4P 219651-40-8P  
 219651-48-6P 219651-50-0P

(prepn. and use as photoacid generator for photoresists)

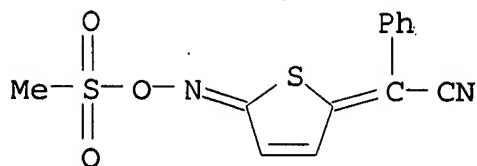
RN 210432-74-9 ZCA

CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-  
 [[(methylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX  
 NAME)



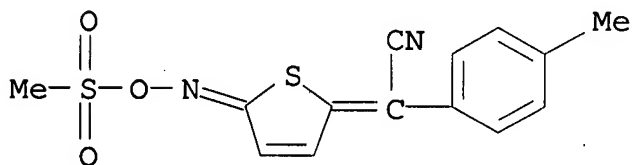
RN 219650-82-5 ZCA

CN Benzeneacetonitrile,  $\alpha$ -[5-[[methylsulfonyl]oxy]imino]-2(5H)-  
 thienylidene]- (9CI) (CA INDEX NAME)



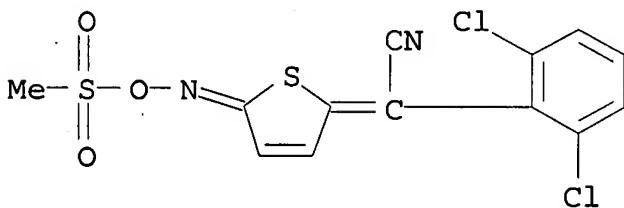
RN 219651-13-5 ZCA

CN Benzeneacetonitrile, 4-methyl- $\alpha$ -[5-  
 [[ (methylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX  
 NAME)



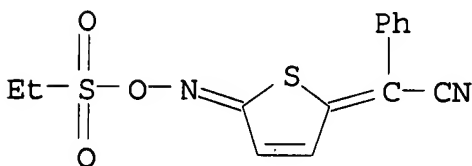
RN 219651-16-8 ZCA

CN Benzeneacetonitrile, 2,6-dichloro- $\alpha$ -[5-  
 [[ (methylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX  
 NAME)



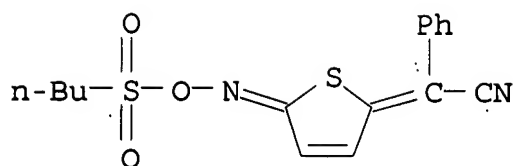
RN 219651-18-0 ZCA

CN Benzeneacetonitrile,  $\alpha$ -[5-[[ (ethylsulfonyl)oxy]imino]-2(5H)-  
 thienylidene]- (9CI) (CA INDEX NAME)



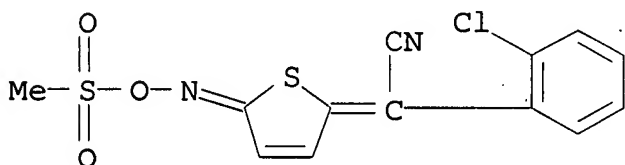
RN 219651-19-1 ZCA

CN Benzeneacetonitrile,  $\alpha$ -[5-[[ (butylsulfonyl)oxy]imino]-2(5H)-  
 thienylidene]- (9CI) (CA INDEX NAME)



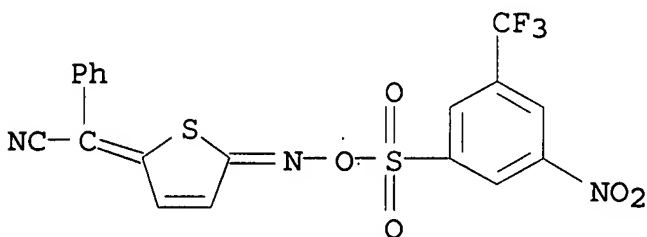
RN 219651-20-4 ZCA

CN Benzeneacetonitrile, 2-chloro- $\alpha$ -[5-  
 [(methylsulfonyl)oxy]imino]-2(5H)-thienylidene]- (9CI) (CA INDEX  
 NAME)



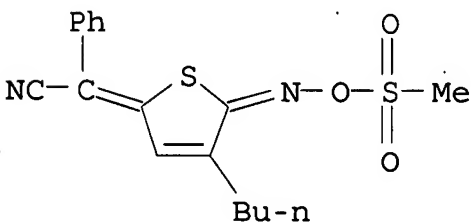
RN 219651-22-6 ZCA

CN Benzeneacetonitrile,  $\alpha$ -[5-[[[3-nitro-5-  
 (trifluoromethyl)phenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-  
 (9CI) (CA INDEX NAME)



RN 219651-24-8 ZCA

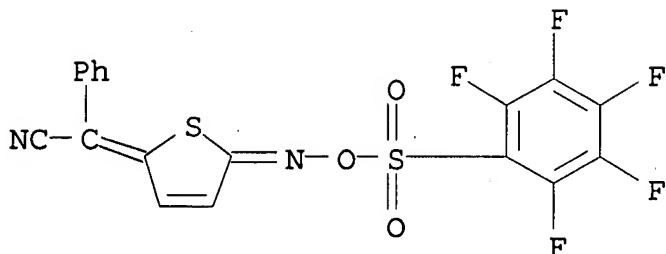
CN Benzeneacetonitrile,  $\alpha$ -[4-butyl-5-[(methylsulfonyl)oxy]imino]-  
 2(5H)-thienylidene]- (9CI) (CA INDEX NAME)



RN 219651-26-0 ZCA

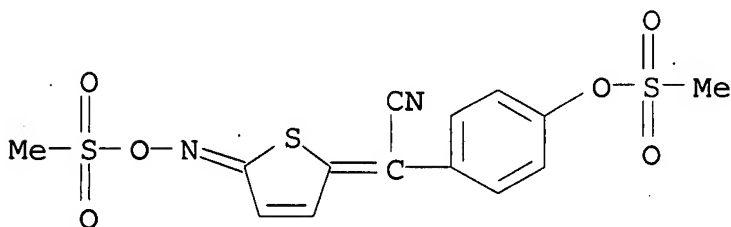
CN Benzeneacetonitrile,  $\alpha$ -[5-[[[pentafluorophenyl]sulfonyl]oxy]i

mino]-2(5H)-thienylidene] - (9CI) (CA INDEX NAME)



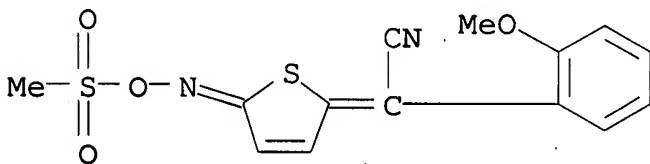
RN 219651-28-2 ZCA

CN Benzeneacetonitrile, 4-[[[(methylsulfonyl)oxy]-α-[5-[[[(methylsulfonyl)oxy]imino]-2(5H)-thienylidene] - (9CI) (CA INDEX NAME)



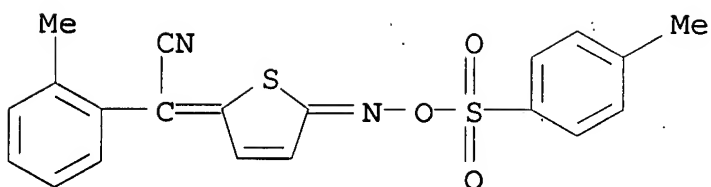
RN 219651-30-6 ZCA

CN Benzeneacetonitrile, 2-methoxy-α-[5-[[[(methylsulfonyl)oxy]imino]-2(5H)-thienylidene] - (9CI) (CA INDEX NAME)

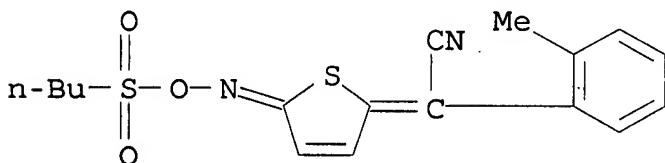


RN 219651-32-8 ZCA

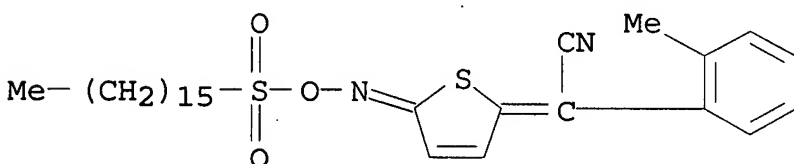
CN Benzeneacetonitrile, 2-methyl-α-[5-[[[(4-methylphenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene] - (CA INDEX NAME)



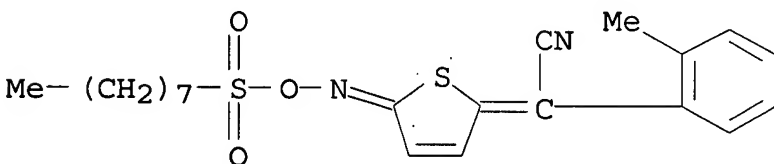
RN 219651-34-0 ZCA

CN Benzeneacetonitrile,  $\alpha$ -[5-[[[butylsulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)

RN 219651-36-2 ZCA

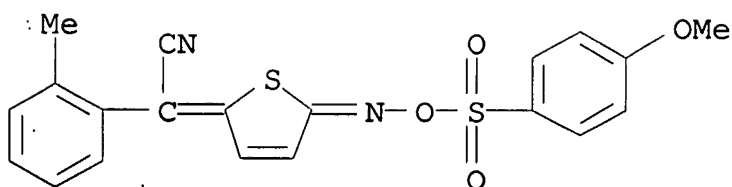
CN Benzeneacetonitrile,  $\alpha$ -[5-[[[hexadecylsulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)

RN 219651-37-3 ZCA

CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-[[[octylsulfonyl]oxy]imino]-2(5H)-thienylidene]- (CA INDEX NAME)

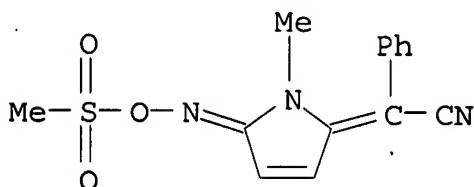
RN 219651-38-4 ZCA

CN Benzeneacetonitrile,  $\alpha$ -[5-[[[4-methoxyphenyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)



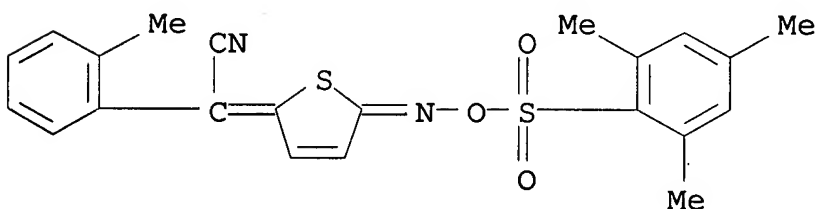
RN 219651-40-8 ZCA

CN Benzeneacetonitrile,  $\alpha$ -[1,5-dihydro-1-methyl-5-[[ (methylsulfonyl)oxy]imino]-2H-pyrrol-2-ylidene] - (9CI) (CA INDEX NAME)



RN 219651-48-6 ZCA

CN Benzeneacetonitrile, 2-methyl- $\alpha$ -[5-[[[(2,4,6-trimethylphenyl)sulfonyl]oxy]imino]-2(5H)-thienylidene] - (9CI) (CA INDEX NAME)



RN 219651-50-0 ZCA

CN Benzeneacetonitrile,  $\alpha$ -[5-[[[(7,7-dimethyl-2-oxobicyclo[2.2.1]hept-1-yl)methyl]sulfonyl]oxy]imino]-2(5H)-thienylidene]-2-methyl- (9CI) (CA INDEX NAME)

SCIENTIFIC REFERENCE BR  
Sci & Tech Inf. Ctr  
SEP 6 2 1997  
Pat. & T.M. Office

Access DB# 236232

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: 9-4-07  
Art Unit: 1752 Phone Number 301-2-1333 Serial Number: 10/322,036  
Mail Box and Bldg/Room Location: 9C15 Results Format Preferred (circle): PAPER ~~DISK~~ ~~E-MAIL~~  
(Rem)

If more than one search is submitted, please prioritize searches in order of need.

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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Plz. See Bib.

Inventors (please provide full names): \_\_\_\_\_

Earliest Priority Filing Date: \_\_\_\_\_

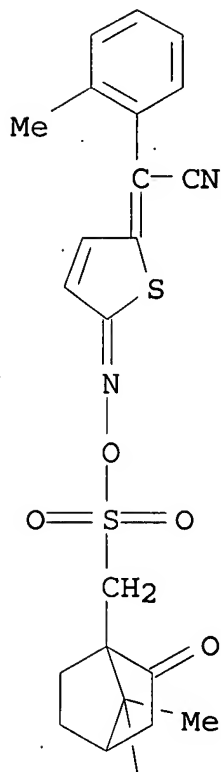
*\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Please search for a photacid

generator of formula (Vi) of Cl. #.1

STAFF USE ONLY		Type of Search	Vendors and cost where applicable
Searcher: <u>EA</u>	NA Sequence (#) _____	STN _____	
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____	
Searcher Location: _____	Structure (#) _____	Questel/Orbit _____	
Date Searcher Picked Up: _____	Bibliographic _____	Dr.Link _____	
Date Completed: <u>9-13-07</u>	Litigation _____	Lexis/Nexis _____	
Searcher Prep & Review Time: _____	Fulltext _____	Sequence Systems _____	
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____	
Online Time: _____	Other _____	Other (specify) _____	

PAGE 1-A



PAGE 2-A

C

IT 210432-74-9P 219650-82-5P 219651-13-5P  
 219651-16-8P 219651-18-0P 219651-19-1P  
 219651-20-4P 219651-22-6P 219651-24-8P  
 219651-26-0P 219651-28-2P 219651-30-6P  
 219651-32-8P 219651-34-0P 219651-36-2P  
 219651-37-3P 219651-38-4P 219651-40-8P  
 219651-48-6P 219651-50-0P

(prepn. and use as photoacid generator for photoresists)

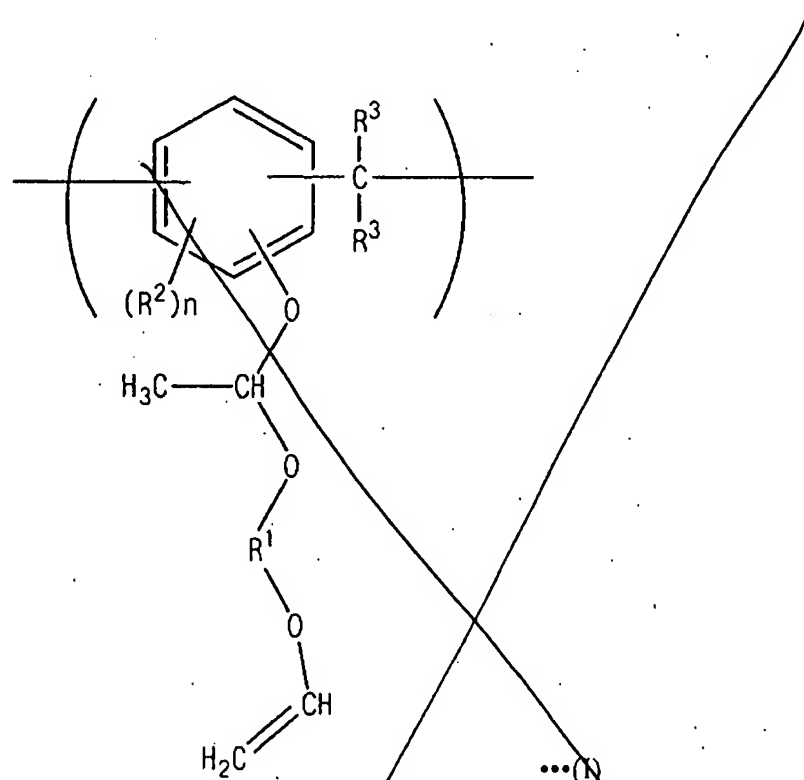
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT



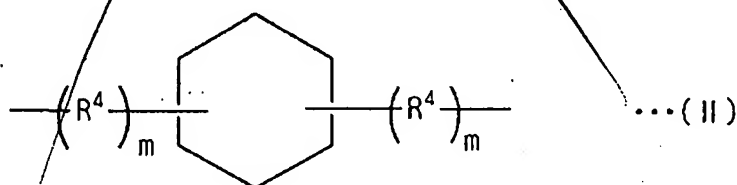
# AMENDMENTS TO THE CLAIMS

1. **(Currently amended)** A chemical amplification type positive photoresist composition prepared by dissolving:

(A) a slightly alkali-soluble or alkali-insoluble novolak resin having a property that solubility in an aqueous alkali solution is enhanced in the presence of an acid, comprising either or both of a constituent unit (a1) represented by the following general formula (I):

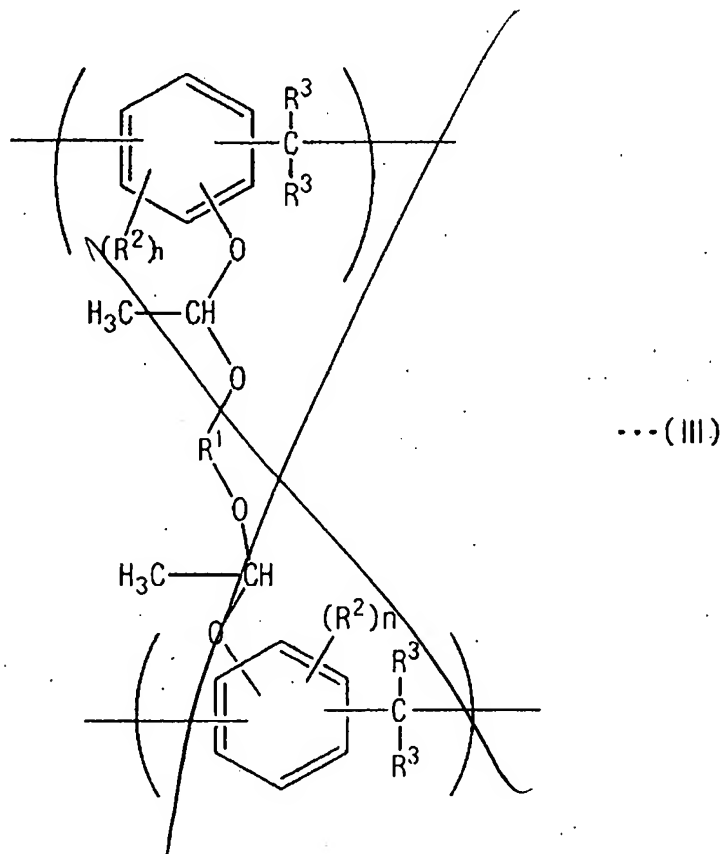


wherein R<sup>1</sup> represents either an alkylene group having 1 to 10 carbon atoms which may have a substituent or a group represented by the following general formula (II):



(wherein R<sup>4</sup> represents an alkylene group having 1 to 10 carbon atoms which may have a substituent and m represents 0 or 1), the alkylene group may have an oxygen bond (ether bond) in the main chain, R<sup>2</sup> and R<sup>3</sup> each independently represents a hydrogen atom or an alkyl group

having 1 to 3 carbon atoms, and n represents an integer of 1 to 3, and an intermolecular crosslinked moiety (a2) represented by the following general formula (III):

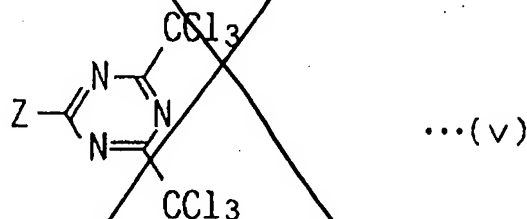


wherein  $R^1$  represents either an alkylene group having 1 to 10 carbon atoms which may have a substituent or a group represented by the above general formula (II) (wherein  $R^4$  represents an alkylene group having 1 to 10 carbon atoms which may have a substituent and m represents 0 or 1), the alkylene group may have an oxygen bond (ether bond) in the main chain,  $R^2$  and  $R^3$  each independently represents hydrogen atom or alkyl group having 1 to 3 carbon atoms, and n represents an integer of 1 to 3; and

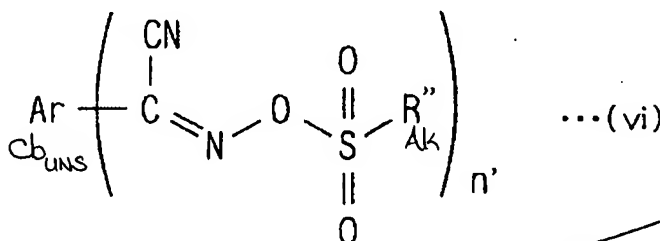
(B) a compound generating an acid under irradiation, wherein said

compound is represented by the following general formulas (v) and (vi)

a combination of the compound (iv) and a bis(trichloromethyl)triazine compound represented by the following formula (v):



wherein Z represents a 4-alkoxyphenyl group, or  
 a compound represented by the following formula (vi):



wherein Ar represents a substituted or unsubstituted phenyl group or a naphthyl group; R'' represents an alkyl group having 1 to 9 carbon atoms; and n' represents an integer of 2 or 3, in an organic solvent,

wherein the content of an acid component in the photoresist composition is 10 ppm or less.

2. (Canceled)

3. (Canceled)

4. (Previously presented) The chemical amplification type positive photoresist composition according to claim 1, wherein the component (B) is a compound generating an acid under irradiation with i-rays (365 nm).

5. (Previously presented) The chemical amplification type positive photoresist composition according to claim 1, which further comprises a basic compound as the component (C).

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L4 4 S L3  
L5 97 S L3 FUL  
SAV L5 LEE036A/A

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L6 0 S L5

FILE 'ZCA' ENTERED AT 15:43:28 ON 13 SEP 2007  
L7 75 S L5  
L8 60 S 1840-2003/PY,PRY AND L7

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L9 STR L3

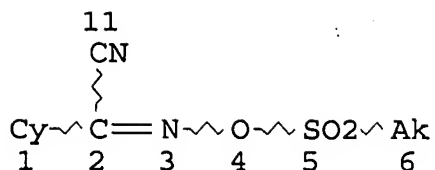
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L12 36 S L11  
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L3 STR



## NODE ATTRIBUTES:

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DEFAULT ECLEVEL IS LIMITED

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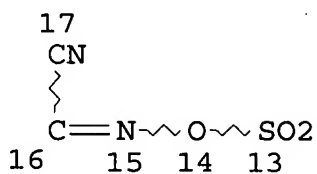
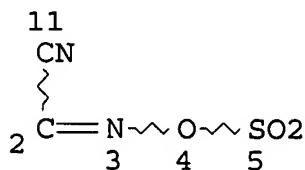
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NUMBER OF NODES IS 7

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L9 STR



## NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

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NUMBER OF NODES IS 10

## STEREO ATTRIBUTES: NONE

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100.0% PROCESSED 4 ITERATIONS

SEARCH TIME: 00.00.01

4 ANSWERS

=&gt; FILE ZCA

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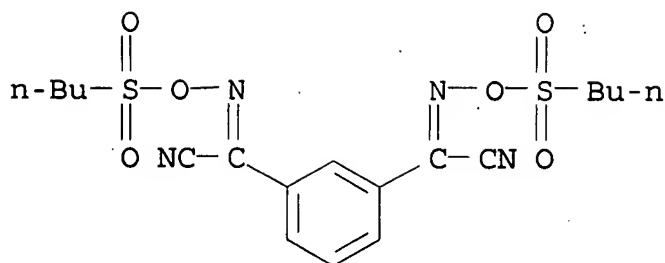
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=> D L13 1-27 BIB ABS HITSTR HITRN

L13 ANSWER 1 OF 27 ZCA COPYRIGHT 2007 ACS on STN  
AN 142:325916 ZCA  
TI Composition for antireflection film and resist pattern formation  
IN Nakayama, Kazuhiko  
PA Tokyo Ohka Kogyo Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 28 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	
PI	JP 2005070154	A	20050317	JP 2003-209378	20030828

PRAI JP 2003-209378 20030828 <--  
AB The compn., for forming the antireflection film under pos.-working photoresist layer, contains (A) a resin, (B) a compd. generating an acid by irradiation, (C) a light absorbing agent, and (D) an organic solvent, in which the compn. crosslinks by heating and changes from insol. to sol. in alk. soln. by the action of acid generated from B. The resist pattern is manufd. by the steps of (1) coating the compn. on a support and heating for antireflection film formation, (2) coating the pos. photoresist on the antireflection film and heating, (3) selectively exposing, (4) post-exposure baking, and (5) developing by an aq. alk. soln. Mixing phenomena of the antireflection film and photoresist layer are prevented and the antireflection film can be removed without dry etching process.  
IT 195394-90-2  
(acid generator; antireflection film for pos. photoresist pattern formation)  
RN 195394-90-2 ZCA  
CN 1,3-Benzenediacetonitrile,  $\alpha,\alpha'$ -bis[[[butylsulfonyl]oxy]imino]- (9CI) (CA INDEX NAME)



IT 195394-90-2

(acid generator; antireflection film for pos. photoresist pattern formation)

L13 ANSWER 2 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 142:325909 ZCA

TI Lift-off resist material and formation of resist pattern with controlled width of under layer

IN Nakayama, Kazuhiko; Harada, Hisanori; Takagi, Isamu

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 28 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005070153	A	20050317	JP 2003-209377	20030828

PRAI JP 2003-209377 20030828 &lt;--

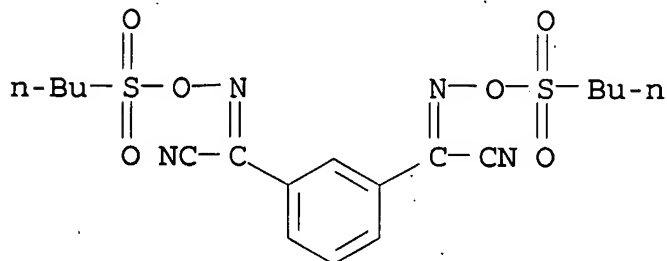
AB The lift-off resist material, comprising (A) a resin, (B) a compd. generating an acid by irradiation, and (C) an org. solvent, crosslinks by heating and changes from insol. to sol. in alk. soln. by the action of acid generated from B. The lift-off resist pattern is manufd. by the steps of (1) forming an under resist layer by coating the lift-off resist material on a support and heating, (2) coating an upper resist layer comprising (non) chem. amplification-type pos. resist compn. and heating, (3) selectively exposing, (4) post exposure baking, and (5) developing with an aq. alk. soln. for forming resist pattern with cross section narrow at the interface between the support and the resist layer. The width of the under resist layer is controlled easily.

IT 195394-90-2

(acid generator; lift-off resist material with under layer contg.)

alkali-sol. resin and acid generator)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha,\alpha'$ -bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)

IT 195394-90-2

(acid generator; lift-off resist material with under layer contg. alkali-sol. resin and acid generator)

L13 ANSWER 3 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 142:144299 ZCA

TI Formation of resist patterns for manufacture of system liquid crystal displays

IN Kurihara, Masaki; Yamaguchi, Toshihiro; Shinkura, Satoshi

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 36 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005010487	A	20050113	JP 2003-174861	20030619
	TW 254191	B	20060501	TW 2004-93114120	20040519

&lt;--

PRAI JP 2003-174861 A 20030619 &lt;--

AB The method involves (1) applying pos. photoresist compns. on substrates, (2) prebaking, (3) forming antireflective films on the resulting resist films, (4) exposing the resist films selectively using masks consisting of mask patterns for formation of  $\leq 2.0\text{-}\mu\text{m}$  resist patterns and mask patterns for formation of  $> 2.0\text{-}\mu\text{m}$  resist patterns, (5) removing the antireflective films, (6) developing the resist films with alkali aq. solns. to give



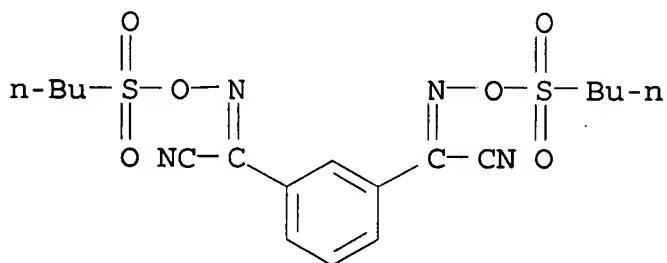
≤2.0-μm resist patterns for integrated circuits and  
 >2.0-μm resist patterns for liq. crystal display parts. Resist  
 patterns with good dimensional stability are obtained.

IT 195394-90-2

(acid generators; formation of resist patterns with good  
 dimensional stability for manuf. of system LCD)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile, α,α'-  
 bis[[(butylsulfonyl)oxy]imino] - (9CI) (CA INDEX NAME)



IT 195394-90-2

(acid generators; formation of resist patterns with good  
 dimensional stability for manuf. of system LCD)

L13 ANSWER 4 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 142:144067 ZCA

TI Positive photoresist compositions and method for forming resist  
 patterns for system LCD with excellent lineality, resolution, and  
 heat resistance

IN Kurihara, Masaki; Hidesaka, Shinichi; Shinkura, Satoshi

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 39 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

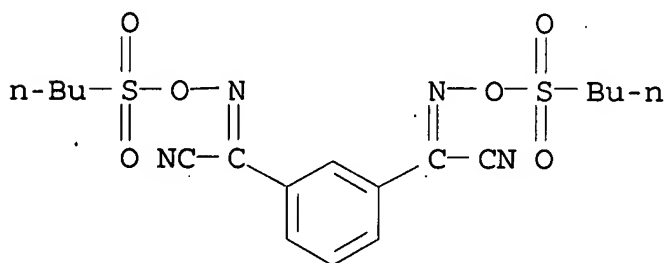
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PI	JP 2005010215	A	20050113	JP 2003-171029	20030616
	KR 2004111039	A	20041231	KR 2004-43715	20040614
PRAI	JP 2003-171029	A	20030616	<--	
OS	MARPAT 142:144067				

AB The compns. contain alkali-sol. polymers or alkali-insol. polymers which become alkali-sol. by acids, wherein the polymers are purified using ion-exchange resins before compn. prepn. The method contains applying the compns. on substrates, prebaking them, selectively exposing the resist films via masks with patterns of  $\leq 2.0$   $\mu\text{m}$  and those of  $> 2.0$   $\mu\text{m}$ , post-exposure baking them, and developing them in alk. solns., thus giving resist patterns for IC and those for LCD units simultaneously.

IT 195394-90-2  
(photoacid generator; pos. photoresists contg. purified alkali-sol. polymers and quinonediazide esters for system LCD manuf.)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha, \alpha'$ -bis[[(butylsulfonyl)oxy]imino] - (9CI) (CA INDEX NAME)



IT 195394-90-2  
(photoacid generator; pos. photoresists contg. purified alkali-sol. polymers and quinonediazide esters for system LCD manuf.)

L13 ANSWER 5 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 142:103184 ZCA

TI Chemically amplified positive photoresist compositions and method for forming resist patterns for system LCD with excellent heat resistance and sensitivity

IN Nakagawa, Yusuke; Hidesaka, Shinichi; Miyagi, Masaru; Harada, Hisanobu

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 22 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 2005010213	A	20050113	JP 2003-171027	

200306  
16

KR 2004111034 A 20041231 KR 2004-43440

200406  
14

PRAI JP 2003-171027 A 20030616 &lt;--

OS MARPAT 142:103184

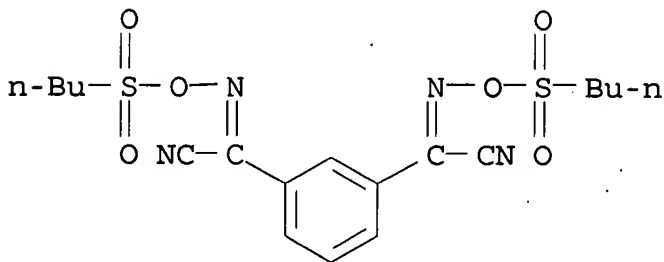
AB The compns. with acid content  $\leq 50$  ppm contain alkali-sol. polymers, compds.  $H_2C:CHOR_1OCH:CH_2$  [ $R_1$  = (un)substituted C1-10 alkylene,  $R_4mQR_4m$ ;  $R_4$  = (un)substituted C1-10 alkylene;  $m = 0, 1$ ], photoacid generators, and org. solvents. The method contains applying the compns. on substrates, prebaking them, selectively exposing the resist films via masks with patterns of  $\leq 2.0$   $\mu m$  and those of  $> 2.0$   $\mu m$ , post-exposure baking them, and developing them in alk. solns., thus giving resist patterns for IC and those for LCD units simultaneously.

IT 195394-90-2

(photoacid generator; chem. amplified pos. photoresists for forming IC and LCD patterns on substrates simultaneously with good heat resistance and sensitivity)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha, \alpha'$ -bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT 195394-90-2

(photoacid generator; chem. amplified pos. photoresists for forming IC and LCD patterns on substrates simultaneously with good heat resistance and sensitivity)

L13 ANSWER 6 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 142:65299 ZCA

TI Chemically amplified positive photoresists with good linearity of resolution and patterning thereof

IN Nakayama, Kazuhiko; Takagi, Isamu

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 27 pp.

CODEN: JKXXAF

DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004354610	A	20041216	JP 2003-151084	20030528
	KR 2004104380	A	20041210	KR 2004-34836	20040517
	CN 1573549	A	20050202	CN 2004-10044681	20040519

PRAI JP 2003-151084 A 20030528 <--

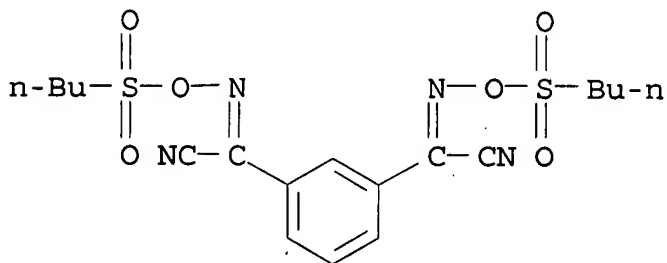
AB The photoresists, having good sensitivity and heat resistance, comprise resins increasing soly. in aq. alk. solns. by acid action, radiation-sensitive acid generators, and org. solvents and polystyrene-converted Mw (GPC detd.) 3000-100,000. The photoresists are applied on substrates, prebaked, exposed through masks possessing  $\leq 2.0\text{-}\mu\text{m}$  patterns and  $> 2.0\text{-}\mu\text{m}$  patterns, baked, and developed with aq. alkali developers to form resist patterns of  $\leq 2.0\text{-}\mu\text{m}$  resoln. for IC and those of  $> 2.0\text{-}\mu\text{m}$  resoln. for LCD simultaneously.

IT 195394-90-2

(radiation-sensitive acid generators; chem. amplified pos. photoresists contg. mol. wt.-regulated resins and with good linearity of resoln. for IC-mounted LCD substrates)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha, \alpha'$ -bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT 195394-90-2

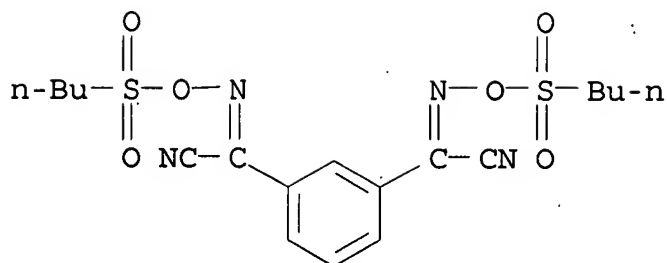
(radiation-sensitive acid generators; chem. amplified pos. photoresists contg. mol. wt.-regulated resins and with good

linearity of resoln. for IC-mounted LCD substrates)

L13 ANSWER 7 OF 27 ZCA COPYRIGHT 2007 ACS on STN  
 AN 142:65298 ZCA  
 TI Chemically amplified positive photoresists for system LCD and their  
 patterning  
 IN Hidesaka, Shinichi; Kurihara, Masaki; Nakagawa, Yusuke; Tate,  
 Toshiaki  
 PA Tokyo Ohka Kogyo Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 20 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 2004354609	A	20041216	JP 2003-151083	200305 28
	CN 1573551	A	20050202	CN 2004-10045733	200405 24
	KR 2004103320	A	20041208	KR 2004-37423	200405 25

PRAI JP 2003-151083 A 20030528 <--  
 AB The photoresists comprise (A) alkali-insol. novolaks prepd. from  
 alkali-sol. novolaks and R1(OCH:CH2)2 [R1 = C1-10 alkylene, R4mQR4m  
 (R4 = C1-10 alkylene; m = 0, 1; Q = cyclohexylene)] and increasing  
 soly. in aq. alkali solns. by acid action, (C) radiation-sensitive  
 acid generators, and (D) org. solvents. The photoresists are  
 applied on substrates, prebaked, exposed through masks contg.  
 $\leq 2.0\text{-}\mu\text{m}$  and  $>2.0\text{-}\mu\text{m}$ -resoln. patterns, baked, and  
 developed to form IC patterns and patterns for LCD, simultaneously.  
 IT 195394-90-2  
 (radiation-sensitive acid generators; chem. amplified pos.  
 photoresists contg. vinyloxymethyl ether-bridged novolaks for  
 system LCD)  
 RN 195394-90-2 ZCA  
 CN 1,3-Benzenediacetonitrile,  $\alpha,\alpha'$ -  
 bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT 195394-90-2

(radiation-sensitive acid generators; chem. amplified pos. photoresists contg. vinyloxymethyl ether-bridged novolaks for system LCD)

L13 ANSWER 8 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 142:45896 ZCA

TI Chemically amplified positive photoresist composition and method for forming resist pattern

IN Nakagawa, Yusuke; Hidesaka, Shinichi; Maruyama, Kenji; Shimatani, Satoshi; Masujima, Masahiro; Nitta, Kazuyuki

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO PCT Int. Appl., 52 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004104703	A1	20041202	WO 2004-JP7206	20040520

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CN 1701280

A

20051123

CN 2004-80000888

200405  
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US 2006003260 A1 20060105 US 2005-528617

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 JP 2003-426503 A 20031224 <--  
 WO 2004-JP7206 W 20040520

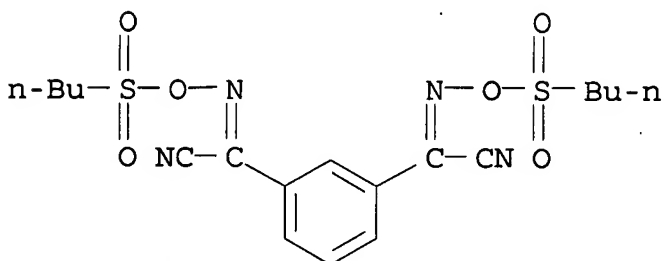
AB The disclosed chem. amplified pos. photoresist compn. comprises an alkali-sol. resin contg. a hydroxystyrene based constituting unit and a styrene based constituting unit, crosslinking agent, an acid generator, and an org. solvent. and a method for forming a resist pattern which comprises using the resist compn. The disclosed method for forming a resist pattern uses the resist compn. The photo resist compn. can form a resist exhibiting high sensitivity, high heat resistance and high resoln. (high contrast) and being reduced in undulation phenomenon.

IT 195394-90-2

(acid generator; pos. photoresist compn. contg. cross linking agent and hydroxystyrene copolymer and)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha,\alpha'$ -bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT 195394-90-2

(acid generator; pos. photoresist compn. contg. cross linking agent and hydroxystyrene copolymer and)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 9 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 142:45895 ZCA

TI Chemically amplified positive photo resist composition and method for forming resist pattern

IN Maruyama, Kenji; Kurihara, Masaki; Miyagi, Ken; Niikura, Satoshi; Shimatani, Satoshi; Masujima, Masahiro; Nitta, Kazuyuki; Yamaguchi,

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 2004104702	A1	20041202	WO 2004-JP7139	20040519

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,  
AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ,  
DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL,  
PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG

CN 1698016                      A                      20051116                      CN 2004-80000692

200405  
19

US 2007117045                      A1                      20070524                      US 2007-622988                      200701  
12

AB The disclosed chem. amplified pos. photoresist compn. which comprises an org. solvent and, dissolved therein, a resin being



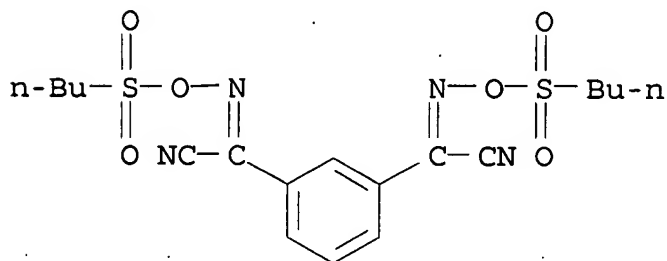
prepd. through the reaction of a novolac resin or a hydroxystyrene resin with a crosslinking agent, being slightly sol. or insol. in an alk. aq. soln. and exhibiting enhanced soly. into an aq. alkali soln. in the presence of an acid, and (B) a compd. generating an acid by the irradiation with a radiation, wherein it contains an acid component in a amt. of 10 ppm or less. The chem. amplified pos. photoresist compn. can form a resist exhibiting good storage stability as a resist soln. in a bottle.

IT 195394-90-2

(acid generator; pos. photoresist compn. contg. crosslinked phenolic resin and)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha,\alpha'$ -bis[[ (butylsulfonyl)oxy]imino] - (9CI) (CA INDEX NAME)



IT 195394-90-2

(acid generator; pos. photoresist compn. contg. crosslinked phenolic resin and)

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 10 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 142:30021 ZCA

TI Chemical amplification-type photoresist laminate, its manufacture, pattern formation, and manufacture of connection terminal

IN Washio, Yasushi; Saito, Koji

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 19 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004347951	A	20041209	JP 2003-146231	20030523

200305  
23

PRAI JP 2003-146231

20030523 &lt;--

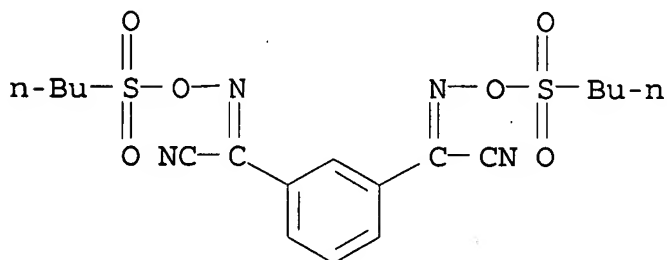
AB The photoresist compn. contains (A) a resin whose soly. to alk. soln. changes by acid, (B) a compd. generating acid by irradiation, and (C) a rust prevention agent, and the compn. is manufd. by mixing A, B, and C. The laminate comprises a support coated with the photoresist compn. Photoresist pattern is formed by (1) forming the photoresist laminate and (2) selectively exposing and developing. Connection terminal comprising a conductive material is formed on non-resist part of the pattern. The photoresist laminate shows good storage stability without changing alkali-soly. before radiation.

IT 195394-90-2

(acid generator; chem. amplification photoresist compn. contg. rust preventing agent)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha,\alpha'$ -bis[[ (butylsulfonyl)oxy]imino] - (9CI) (CA INDEX NAME)



IT 195394-90-2

(acid generator; chem. amplification photoresist compn. contg. rust preventing agent)

L13 ANSWER 11 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 142:30020 ZCA

TI Chemical amplification-type photoresist laminate, its manufacture, pattern formation, and manufacture of connection terminal

IN Washio, Yasushi; Saito, Koji

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004347950	A	20041209	JP 2003-146230	200305

WO 2006059392

A1

20060608

WO 2004-JP18032

23

200412  
03

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA,  
CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR,  
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,  
MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,  
SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,  
VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,  
IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF,  
BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG,  
BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,  
AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

CN 1842741

A

20061004

CN 2004-80005670

200412  
03

EP 1818722

A1

20070815

EP 2004-821365

200412  
03

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,  
IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR

PRAI JP 2003-146230

A

20030523 &lt;--

WO 2004-JP18032

W

20041203

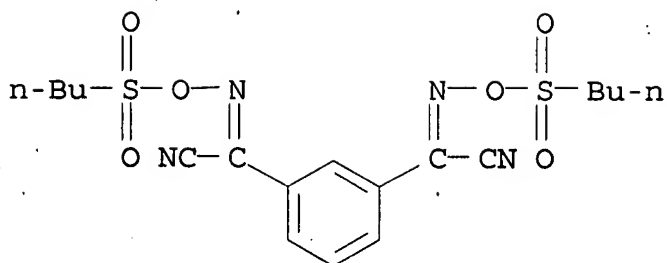
AB In manuf. of the photoresist laminate, a support with partially or wholly coated with Cu layer is oxidized for Cu oxide layer formation, then coated with the chem. amplification-type photoresist layer contg. (A) a resin whose soly. to alk. soln. changes by acid and (B) a compd. generating acid by irradiation. Photoresist pattern is formed by (1) forming the photoresist laminate and (2) selectively exposing and developing. Connection terminal comprising a conductive material is formed on non-resist part of the pattern. The photoresist laminate shows good storage stability without changing alkali-soly. before radiation.

IT 195394-90-2

(acid generator; chem. amplification photoresist laminate on support with copper oxide layer for connection terminal manuf.)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha,\alpha'$ -bis[[(butylsulfonyl)oxy]imino] - (9CI) (CA INDEX NAME)



IT 195394-90-2

(acid generator; chem. amplification photoresist laminate on support with copper oxide layer for connection terminal manuf.)

L13 ANSWER 12 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 142:30019 ZCA

TI Chemically amplified positive photoresist compositions with good storage stability and patterning thereon

IN Nakagawa, Yusuke; Hidesaka, Shinichi

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 20 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004347852	A	20041209	JP 2003-144699	20030522

PRAI JP 2003-144699 20030522 <--

OS MARPAT 142:30019

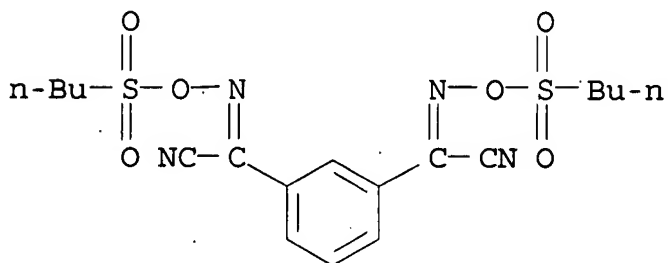
AB The compns. comprise (A) alkali-sol. resins bearing OH groups in sidechains, (B) compds.  $H_2C:CHOR_1OCH:CH_2$  [ $R_1 = C_1-10$  alkylene,  $R_4mQR_4m$  ( $R_4 = C_1-10$  alkylene;  $m = 0, 1$ ;  $Q =$  cyclohexylene)], (C) radiation-sensitive acid generators, (D) NXYZ ( $X-Z = C \geq 4$  alkyl,  $C \geq 3$  cycloalkyl, and/or aralkyl for  $\geq 1$  of them and  $C \leq 3$  alkyl and/or H for the remainders), and org. solvents. The compns. achieve extremely high heat resistance, less time degrdn. of sensitivity, and high resln. The compns. are applied on substrates at 1.5-7.0- $\mu m$  thickness, patternwise exposed, baked, and developed with aq. alkalis to form patterns.

IT 195394-90-2

(radiation-sensitive acid generators; chem. amplified pos. photoresists contg. alkylamines and showing high resln. and good

heat resistance)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha,\alpha'$ -  
bis[[ (butylsulfonyl)oxy]imino] - (9CI) (CA INDEX NAME)

IT 195394-90-2

(radiation-sensitive acid generators; chem. amplified pos.  
photoresists contg. alkylamines and showing high resolu. and good  
heat resistance)

L13 ANSWER 13 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 141:403470 ZCA

TI Chemical amplification positive-working photoresist composition, its  
thick laminate, formation of thick resist pattern and connection  
terminal

IN Okui, Toshiki; Misumi, Koichi

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 23 pp.

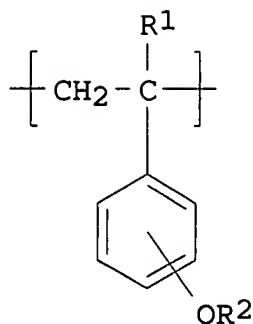
CODEN: JKXXAF

DT Patent

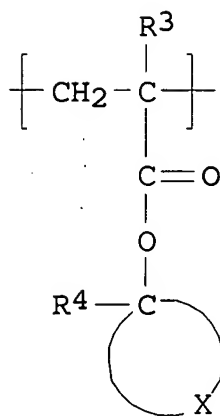
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004309777	A	20041104	JP 2003-102957	20030407
PRAI	JP 2003-102957		20030407	<--	
GI					



I.



II

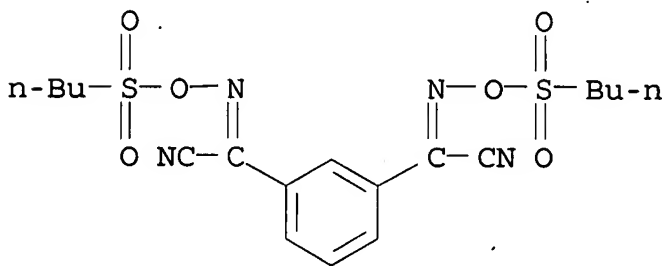
AB The compn. contains (A) a compd. generating an acid by the action of actinic ray or irradiation and (B) a resin compn., whose soly. to alkali increases by the action of the acid, contg. (b1) a resin with structural unit I (R1 = H, Me; R2 = acid labile group) and (b2) a resin with structural unit II (R3 = H, Me; R4 = C1-4 alkyl; X = atoms to form 5- to 20-membered hydrocarbon ring). The laminate comprises a support and 10-150  $\mu\text{m}$ -thick layer of the photoresist. The thick resist pattern is manufd. by (1) forming the photoresist laminate, (2) selectively irradiating the actinic ray or radiation, and (3) developing the resist. Conductive connection terminal is formed on the non-resist area of the pattern. The compn. shows high resolu., good developability, and plating resistance.

IT 195394-90-2

(acid generator; chem. amplification thick photoresist compn. for connection terminal formation)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha,\alpha'$ -bis[[[butylsulfonyl]oxy]imino] - (9CI) (CA INDEX NAME)



IT 195394-90-2

(acid generator; chem. amplification thick photoresist compn. for

connection terminal formation)

L13 ANSWER 14 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 141:386396 ZCA

TI Chemical amplification positive-working photoresist composition, its thick laminate, formation of thick resist pattern and connection terminal

IN Okui, Toshiki; Misumi, Koichi; Saito, Koji

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 21 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

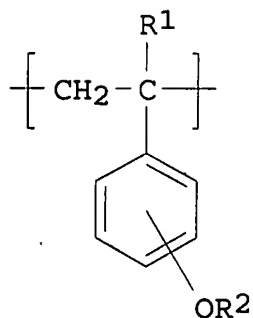
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 2004309776	A	20041104	JP 2003-102956	20030407

PRAI JP 2003-102956

20030407 <--

GI



I

AB The compn. contains (A) a compd. generating an acid by the action of actinic ray or irradiation, (B) a resin with structural unit I ( $\text{R}^1 = \text{H}$ ,  $\text{Me}$ ;  $\text{R}^2 =$  acid labile group) and whose soly. to alkali increases by the action of the acid, and (C) an alkali-sol. resin. The laminate comprises a support and 10-150  $\mu\text{m}$ -thick layer of the photoresist. The thick resist pattern is manufd. by (1) forming the photoresist laminate, (2) selectively irradiating the actinic ray or radiation, and (3) developing the resist. Connection terminal is formed on the non-resist area of the pattern. The compn. shows high contrast,

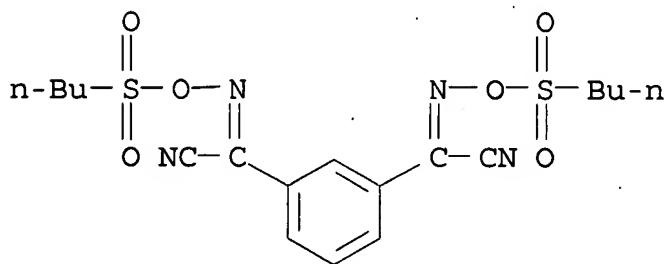
gives clear patterns, and good plating resistance.

IT 195394-90-2

(acid generator; chem. amplification-type thick photoresist compn. for manuf. of connection terminal)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha,\alpha'$ -bis[[ (butylsulfonyl)oxy]imino] - (9CI) (CA INDEX NAME)



IT 195394-90-2

(acid generator; chem. amplification-type thick photoresist compn. for manuf. of connection terminal)

L13 ANSWER 15 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 141:386395 ZCA

TI Chemical amplification positive-working photoresist composition, its thick laminate, formation of thick resist pattern and connection terminal

IN Okui, Toshiki; Misumi, Koichi

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 23 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

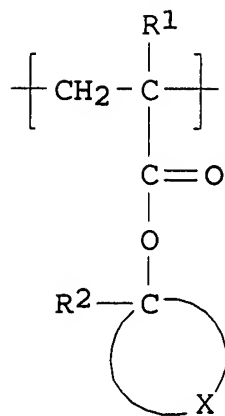
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004309775	A	20041104	JP 2003-102955	20030407

PRAI JP 2003-102955

20030407 <--

GI





I

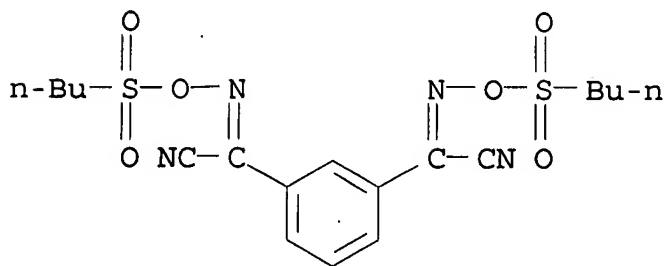
AB The compn. contains (A) a compd. generating an acid by the action of actinic ray or irradiation, (B) a resin with structural unit I ( $\text{R}^1 = \text{H}$ ,  $\text{Me}$ ;  $\text{R}^2 =$  lower alkyl;  $\text{X} =$  atoms to form 5- to 20-membered hydrocarbon ring) and whose soly. to alkali increases by the action of the acid, and (C) an alkali-sol. resin. The laminate comprises a support and 10-150  $\mu\text{m}$ -thick layer of the photoresist. The thick resist pattern is manufd. by (1) forming the photoresist laminate, (2) selectively irradiating the actinic ray or radiation, and (3) developing the resist. Connection terminal is formed on the non-resist area of the pattern. The compn. shows high contrast, gives clear patterns, and good plating resistance.

IT 195394-90-2

(acid generator; chem. amplification thick photoresist compn. for manuf. of connection terminal)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha, \alpha'$ -bis[[(butylsulfonyl)oxy]imino] - (9CI) (CA INDEX NAME)



IT 195394-90-2

(acid generator; chem. amplification thick photoresist compn. for

manuf. of connection terminal)

L13 ANSWER 16 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 141:372780 ZCA

TI Chemical amplification positive-working photoresist composition, its thick laminate, formation of thick resist pattern and connection terminal

IN Okui, Toshiki; Misumi, Koichi

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 23 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

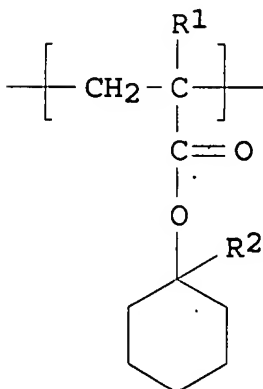
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 2004309778	A	20041104	JP 2003-102958	20030407

PRAI JP 2003-102958

20030407 <--

GI



I

AB The compn. contains (A) a compd. generating an acid by the action of actinic ray or irradiation and (B) a resin with structural unit I (R1 = H, Me; R2 = lower alkyl), whose solubility to alkali increases by the action of the acid. The laminate comprises a support and 10-150  $\mu\text{m}$ -thick layer of the photoresist. The thick resist pattern is manufactured by (1) forming the photoresist laminate, (2) selectively

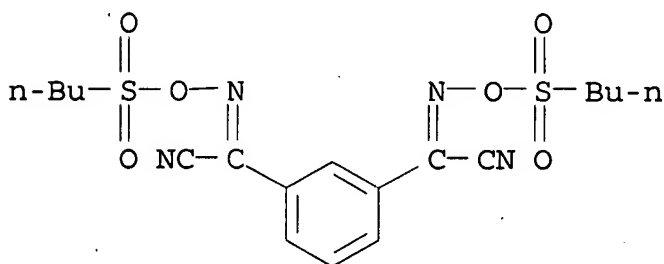
irradiating the actinic ray or radiation, and (3) developing. Conductive connection terminal is formed on the non-resist area of the pattern. The compn. shows high contrast, gives clear patterns, and good plating resistance.

IT 195394-90-2

(acid generator; chem. amplification thick photoresist compn. for manuf. of connection terminal)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha,\alpha'$ -bis[[ (butylsulfonyl)oxy]imino] - (9CI) (CA INDEX NAME)



IT 195394-90-2

(acid generator; chem. amplification thick photoresist compn. for manuf. of connection terminal)

L13 ANSWER 17 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 140:415085 ZCA

TI Positive-working photoresist composition and resist pattern formation for manufacture of liquid crystal display

IN Katano, Akira; Tate, Toshiaki; Miyagi, Masaru

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 2004144905	A	20040520	JP 2002-308477	20021023
	TW 256524	B	20060611	TW 2003-92128445	20031014
				<--	
	KR 2004036560	A	20040430	KR 2003-72491	200310

17

CN 1497347

A

20040519

CN 2003-10101490

200310

21

PRAI JP 2002-308477 A 20021023 &lt;--

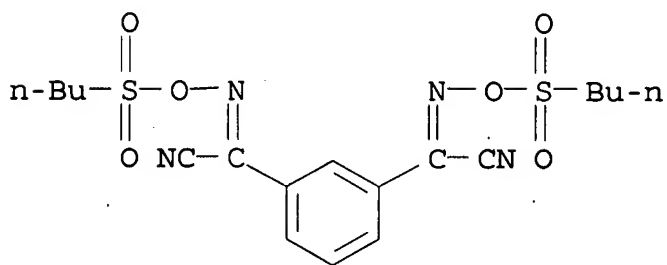
AB The compn. contains (A) an alkali-sol. resin contg. novolak resin with 100-400 nm/s soly. to 2.38 wt.% tetramethylammonium hydroxide aq. soln., (B) a compd. generating acid by irradiation, and (C) a crosslinkable polyvinyl ether. Resist pattern is formed by the steps of (1) coating the compn. on a substrate and pre-baking, (2) selectively exposing the resist film through a mask with  $\leq 2.0$  and  $> 2.0$  nm patterns, (3) post exposure baking, (4) developing the resist film by aq. alkali soln. for simultaneously forming  $\leq 2.0$  pattern for integrated circuits and  $> 2.0$  nm pattern for liq. crystal displays, and (5) rinsing for washing the developer. High resolution resist pattern is obtained even under low numerical aperture exposure conditions.

IT 195394-90-2

(acid generator; photoresist compn. contg. novolak resin, acid generator and polyvinyl ether for manuf. of liq. crystal display)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile;  $\alpha, \alpha'$ -bis[[[butylsulfonyl]oxy]imino] - (9CI) (CA INDEX NAME)



IT 195394-90-2

(acid generator; photoresist compn. contg. novolak resin, acid generator and polyvinyl ether for manuf. of liq. crystal display)

L13 ANSWER 18 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 138:360407 ZCA

TI Thick film photoresist layer laminate, method of manufacturing thick film resist pattern, and method of manufacturing connecting terminal

IN Saito, Koji; Washio, Yasushi; Okui, Toshiki

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO U.S. Pat. Appl. Publ., 7 pp.

CODEN: USXXCO

DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003087187	A1	20030508	US 2002-283513	20021030
	JP 2003140347	A	20030514	JP 2001-338474	20011102
	TW 227811	B	20050211	TW 2002-91125261	20021025

PRAI JP 2001-338474 A 20011102 <--

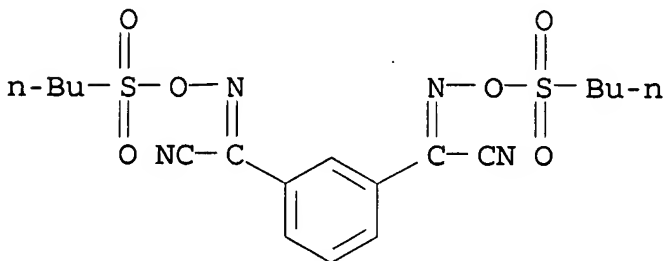
AB A thick film photoresist layer laminate comprises a substrate (a), and a thick film photoresist layer (b) contg. a resin whose alkali soly. changes due to the action of an acid, and an acid generator, which are laminated via a shield layer (c) which prevents the substrate (a) from contacting the thick film photoresist layer (b). A method of forming a thick film resist pattern and a method of making a connecting terminal are also claimed.

IT 195394-90-2

(chem. amplified photoresist compn. for thick film photoresist laminate)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha,\alpha'$ -bis[[ (butylsulfonyl)oxy]imino] - (9CI) (CA INDEX NAME)



IT 195394-90-2

(chem. amplified photoresist compn. for thick film photoresist laminate)

AN 138:195891 ZCA  
 TI Chemically amplified negative photoresist composition for the  
 formation of thick films, photoresist base material and method of  
 forming bumps  
 IN Washio, Yasushi; Saito, Koji; Okui, Toshiki; Komano, Hiroshi  
 PA Tokyo Ohka Kogyo Co., Ltd., Japan  
 SO U.S. Pat. Appl. Publ., 11 pp.  
 CODEN: USXXCO

DT Patent  
 LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 2003039921	A1	20030227	US 2002-194298	200207 15
				<--	
	US 6838229	B2	20050104		
	JP 2003114531	A	20030418	JP 2002-110283	200204 12
				<--	
	JP 3753424	B2	20060308		
	TW 242689	B	20051101	TW 2002-91108855	200204 29
				<--	
	DE 10234668	A1	20030227	DE 2002-10234668	200207 30
				<--	

PRAI JP 2001-229680 A 20010730 <--

OS MARPAT 138:195891

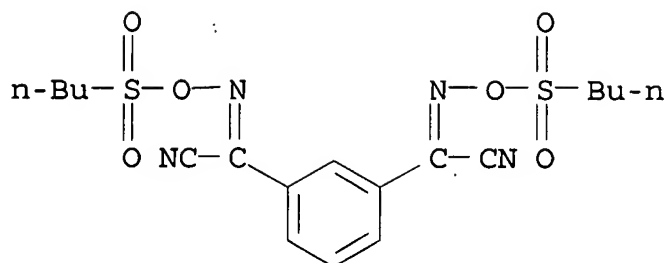
AB A chem. amplified neg. photoresist compn. is used for the formation  
 of thick films having a thickness of 20-150  $\mu$ m and includes (A)  
 an alkali-sol. resin, (B) a compd. which generates an acid upon  
 irradiation with active light or radiant ray, and (C) a compd. which  
 serves as a crosslinking agent in the presence of an acid. The  
 alkali-sol. resin (A) includes a novolak resin having a wt. av. mol.  
 wt. of 5000-10000, and a polymer contg. at least a hydroxystyrene  
 constitutional unit and having a wt. av. mol. wt. of  $\leq$  5000.

IT 195394-90-2

(acid generator; chem. amplified neg. photoresist compn. for  
 formation of thick films contg.)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha,\alpha'$ -  
 bis[[[butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT 195394-90-2

(acid generator; chem. amplified neg. photoresist compn. for formation of thick films contg.)

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 20 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 138:9655 ZCA

TI Negative photoresist compositions, photoresist films and their use

IN Saito, Koji; Misumi, Kouichi; Okui, Toshiki; Komano, Hiroshi

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Ger. Offen., 12 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10222387	A1	20021128	DE 2002-10222387	20020521
JP 2003043688	A	20030213	JP 2002-110282	20020412
JP 3710758	B2	20051026		
TW 594390	B	20040621	TW 2002-91109161	20020502
US 2003064319	A1	20030403	US 2002-147984	20020520
US 7063934	B2	20060620		

JP 2005309451 A 20051104 JP 2005-134022

200505  
02

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JP 3895353 B2 20070322  
KR 2005089754 A 20050908 KR 2005-68444

200507  
27

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US 2006035169 A1 20060216 US 2005-258273

200510  
26

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US 2006035170 A1 20060216 US 2005-258274

200510  
26

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US 7129018 B2 20061031  
PRAI JP 2001-151131 A 20010521 <--  
JP 2002-110282 A3 20020412 <--  
KR 2002-27420 A3 20020517 <--  
US 2002-147984 A3 20020520 <--

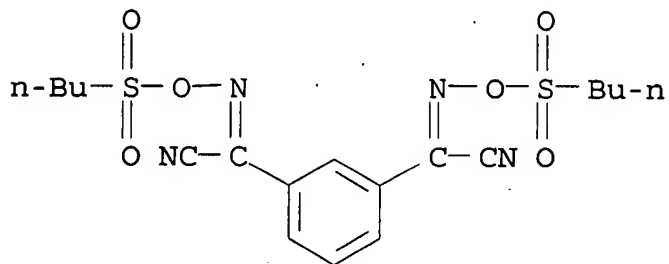
AB The invention relates to a neg. photoresist compn., which is used for forming thick films and comprises a novolak resin, a plasticizer, a crosslinking agent and an acid generator. This compn. is applied on a substrate and results in a 5-10  $\mu\text{m}$  thick photoresist film. The compn. is homogeneously applied on a substrate of an electronic part, a mask pattern is formed, the pattern is developed, and finally the pattern is removed.

IT 195394-90-2

(acid generator; neg. photoresist compns., photoresist films and their use for electronic device fabrication)

RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha,\alpha'$ -bis[[(butylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT 195394-90-2

(acid generator; neg. photoresist compns., photoresist films and



their use for electronic device fabrication)

L13 ANSWER 21 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 135:144690 ZCA

TI Negative-working resist material and manufacture of ion-implanted substrate using mask prepared from the resist

IN Kanta, Yoshiki; Morio, Kimitaka; Haraguchi, Takayuki

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 2001209179	A	20010803	JP 2000-344251	200011 10
				<--	
	US 6399275	B1	20020604	US 2000-707890	200011 08
				<--	
	TW 554251	B	20030921	TW 2000-89124105	200011 14
				<--	

PRAI JP 1999-323629 A 19991115 <--

OS MARPAT 135:144690

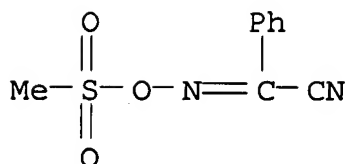
AB The resist material comprises a chem.-amplified neg.-working resist compn. contg. (A1) an alkali-sol. m-cresol novolak resin or (A2) a mixt. of m-cresol-novolak and poly(hydroxystyrene), (B) a compd. generating an acid by irradiation, (C) a crosslinking agent having  $\geq 1$  hydroxyalkyl group and lower alkoxyalkyl group, and optionally (D) lower aliph. amines and (E) carboxylic acids, and has film thickness 4.0-10.0  $\mu\text{m}$ . An ion-implanted substrate is manufd. using a mask having a resist pattern prepd. by selective exposure of the above neg. resist material, heating, and development with an alkali. The resist pattern has high heat resistance and good profile suitable for a mask.

IT 68272-53-7 195394-90-2

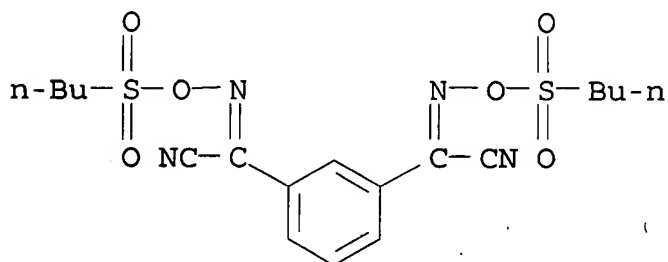
(photoacid generator; neg.-working resist material contg. m-cresol novolak and manuf. of ion-implanted substrate using mask prepd. from the resist)

RN 68272-53-7 ZCA

CN Benzeneacetonitrile,  $\alpha$ -[[[(methylsulfonyl)oxy]imino]- (9CI)  
(CA INDEX NAME)



RN 195394-90-2 ZCA  
 CN 1,3-Benzenediacetonitrile,  $\alpha,\alpha'$ -bis[[ (butylsulfonyl)oxy]imino] - (9CI) (CA INDEX NAME)



IT 68272-53-7 195394-90-2  
 (photoacid generator; neg.-working resist material contg.  
 m-cresol novolak and manuf. of ion-implanted substrate using mask  
 prep. from the resist)

L13 ANSWER 22 OF 27 ZCA COPYRIGHT 2007 ACS on STN  
 AN 133:230461 ZCA  
 TI Oxime derivatives and the use thereof as photoinitiators  
 IN Kura, Hisatoshi; Yamato, Hitoshi; Ohwa, Masaki; Dietliker, Kurt  
 PA Ciba Specialty Chemicals Holding Inc., Switz.  
 SO PCT Int. Appl., 84 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000052530	A1	20000908	WO 2000-EP1404	20000221

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SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ,  
 VN, YU, ZA, ZW  
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF,  
 BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
 EP 1163553 A1 20011219 EP 2000-920439  
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 EP 1163553 B1 20060614  
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 PT, IE, SI, LT, LV, FI, RO, CY  
 JP 2002538241 T 20021112 JP 2000-602686  
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 EP 1635220 A2 20060315 EP 2005-111899  
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 PT, IE, FI, CY  
 AT 330254 T 20060715 AT 2000-920439  
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 US 6806024 B1 20041019 US 2001-914433  
 200108  
 27  
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 PRAI EP 1999-810180 A 19990303 <--  
 EP 2000-920439 A3 20000221 <--  
 WO 2000-EP1404 W 20000221 <--  
 OS MARPAT 133:230461  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB This patent disclosed radically photopolymerizable compns. suitable for prepn. of color filter systems, comprising at least one ethylenically unsatd. photopolymerizable compd., at least one compd. as photoinitiator of formulas I, II, III, IV, V, and/or IV (m = 0, 1; n = 0, 1, 2 or 3; p = 1, 2; R1 = Ph, naphthyl, anthracyl or phenanthryl, heteroaryl radical, C2-C12 alkenyl, C4-C8 cycloalkenyl, or C6-C12 bicycloalkenyl; R1' = C2-C12 alkylene, or phenylene; R2

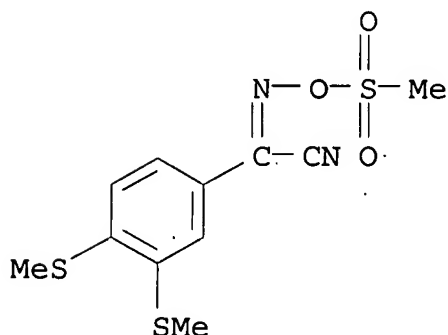
has one of the meanings of R1 or is phenyl; R3 is C1-C18 alkylsulfonyl, or phenyl-C1-C3 alkylsulfonyl if x = 1, R3 is for example C2-C12 alkylenedisulfonyl if x is 2; R4, R5 = H, halogen, or C1-C8 alkyl; R6, R7, R8 = H, R26Y-, or phenyl; R9 inter alia is C5-C8 cycloalkyl, or phenyl; A = -S-, -O-, or -NR10-; Q = C1-C8-alkylene optionally interrupted by -O-; X = -O- or -NR9-; R10 = H, or phenyl), and at least one coinitiator.

IT 190668-89-4 193222-02-5 195394-89-9  
204993-47-5

(radically photopolymerizable compn. contg.)

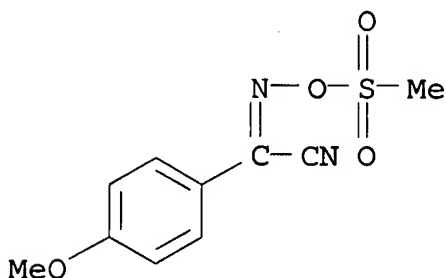
RN 190668-89-4 ZCA

CN Benzeneacetonitrile,  $\alpha$ -[[ (methylsulfonyl)oxy]imino]-3,4-bis(methylthio)- (9CI) (CA INDEX NAME)



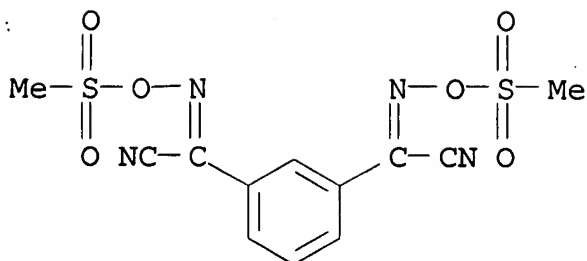
RN 193222-02-5 ZCA

CN Benzeneacetonitrile, 4-methoxy- $\alpha$ -[[ (methylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)

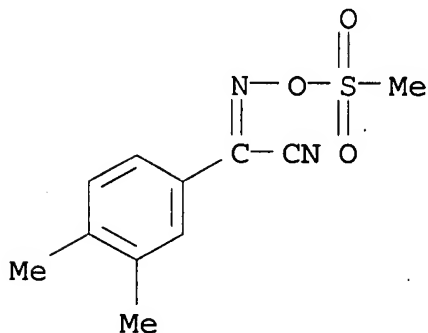


RN 195394-89-9 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha,\alpha'$ -bis[[ (methylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



RN 204993-47-5 ZCA  
 CN Benzeneacetonitrile, 3,4-dimethyl-α-  
 [[(methylsulfonyl)oxy]imino]- (9CI) (CA INDEX NAME)



IT 190668-89-4 193222-02-5 195394-89-9  
 204993-47-5

(radically photopolymerizable compn. contg.)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 23 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 130:160671 ZCA

TI Electron beam negative-working resist composition containing oxime sulfonate composition

IN Ohmori, Katsumi; Ishikawa, Kiyoshi; Haneda, Hideo; Yamazaki, Hiroyuki; Kanda, Yoshiki; Komano, Hiroshi

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

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PI JP 11015158 A 19990122 JP 1997-162345

199706  
19

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JP 3496916 B2 20040216  
PRAI JP 1997-162345 19970619 <--

OS MARPAT 130:160671

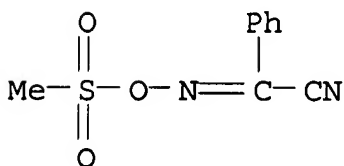
AB The title resist compn. contains an alkali-sol. resin,  $\geq 1$  oxime sulfonate compd. selected from  $R_1C(CN):NOSO_2R_2$  and  $X[C(CN):NOSO_2R_3]_n$  [ $R_1$  = arom. group;  $R_2$  = (halogenated) lower alkyl;  $R_3$  = (substituted) hydrocarbyl;  $X$  = di- or trivalent hydrocarbyl;  $n = 2, 3$ ], and an acid-crosslinking substance. The compn. shows improved contrast and high sensitivity toward electron beams and provides a high resoln. pattern with good profile.

IT 68272-53-7,  $\alpha$ -(Methylsulfonyloxyimino)phenylacetoni-  
le 195394-89-9 195394-90-2

(electron beam neg.-working resist compn. contg. oxime sulfonate compn. of)

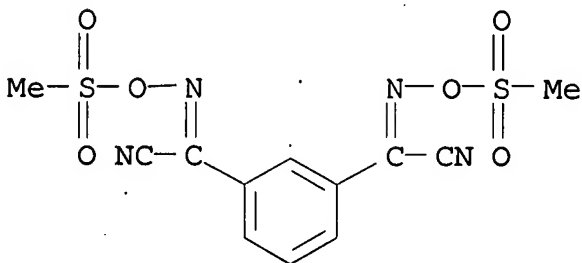
RN 68272-53-7 ZCA

CN Benzeneacetonitrile,  $\alpha$ -[[ (methylsulfonyl)oxy]imino] - (9CI)  
(CA INDEX NAME)



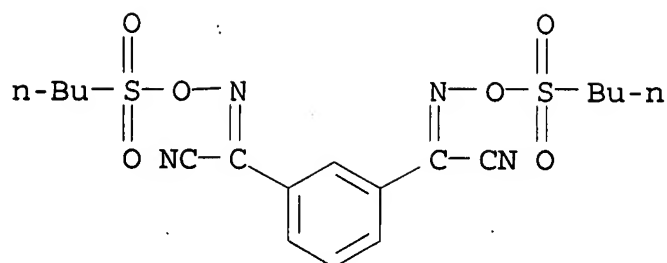
RN 195394-89-9 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha, \alpha'$ -  
bis[[ (methylsulfonyl)oxy]imino] - (9CI) (CA INDEX NAME)



RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha, \alpha'$ -  
bis[[ (butylsulfonyl)oxy]imino] - (9CI) (CA INDEX NAME)



IT 68272-53-7,  $\alpha$ -(Methylsulfonyloxyimino)phenylacetone nitrile 195394-89-9 195394-90-2  
(electron beam neg.-working resist compn. contg. oxime sulfonate compn. of)

L13 ANSWER 24 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 128:328777 ZCA

TI Resist laminate and patterning using it

IN Sato, Mitsuru; Omori, Katsumi; Iguchi, Etsuko; Ishikawa, Kiyoshi; Kaneko, Fumitake; Nakayama, Toshimasa

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

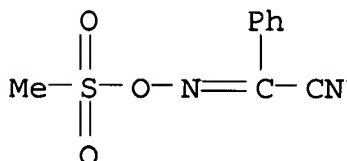
LA Japanese

FAN.CNT 1

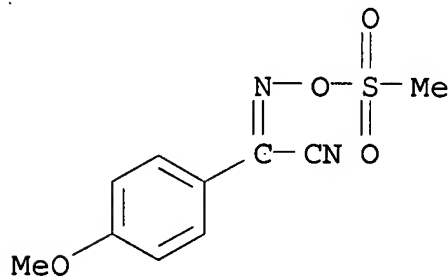
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10090880	A	19980410	JP 1996-239590	19960910
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	JP 3053072	B2	20000619		
	US 5925495	A	19990720	US 1997-924260	19970905
				<--	
	US 6083665	A	20000704	US 1999-273262	19990322
				<--	
PRAI	JP 1996-239590	A	19960910	<--	
	US 1997-924260	A3	19970905	<--	
OS	MARPAT 128:328777				
AB	The resist laminate comprises an antireflective film on a substrate, and a neg.-working resist film contg. an oxime sulfonate-type acid				

generator formed on the film. The resist film is selectively irradiated with an actinic ray, heat-treated, developed to form a neg. resist pattern on the reflective film, and the exposed antireflective film was dry-etched using the resist pattern as a mask to form a pattern. The laminate provides high-resoln. patterns with good profile and dimensional stability.

- IT 68272-53-7,  $\alpha$ -(Methylsulfonyloxyimino)phenylacetone  
 le 193222-02-5,  $\alpha$ -(Methylsulfonyloxyimino)-4-methoxyphenylacetone 195394-89-9  
 (neg.-working resist film contg. oxime sulfonate-type acid generator in laminate for patterning)
- RN 68272-53-7 ZCA
- CN Benzeneacetone,  $\alpha$ -[[methylsulfonyl]oxy]imino]- (9CI)  
 (CA INDEX NAME)

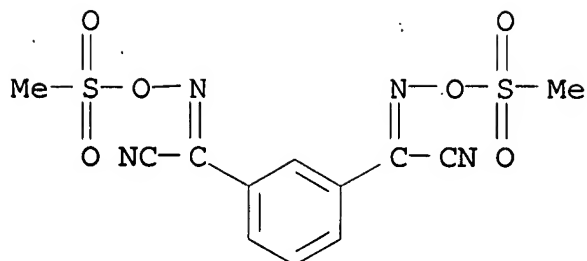


- RN 193222-02-5 ZCA
- CN Benzeneacetone, 4-methoxy- $\alpha$ -[[methylsulfonyl]oxy]imino]- (9CI) (CA INDEX NAME)



- RN 195394-89-9 ZCA
- CN 1,3-Benzenediacetonitrile,  $\alpha, \alpha'$ -bis[[methylsulfonyl]oxy]imino]- (9CI) (CA INDEX NAME)





IT 68272-53-7,  $\alpha$ -(Methylsulfonyloxymino)phenylacetone  
 le 193222-02-5,  $\alpha$ -(Methylsulfonyloxymino)-4-  
 methoxyphenylacetone 195394-89-9  
 (neg.-working resist film contg. oxime sulfonate-type acid  
 generator in laminate for patterning)

L13 ANSWER 25 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 128:68506 ZCA

TI Pattern formation using high-sensitive chemical amplification-type  
 resist

IN Haneda, Hideo; Sugata, Yoshiki; Yamazaki, Hiroyuki; Komano, Hiroshi  
 PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

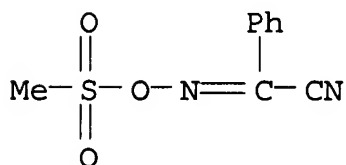
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09292704	A	19971111	JP 1996-105922	19960425

PRAI JP 1996-105922 19960425 <--

OS MARPAT 128:68506

AB A pattern is formed on a substrate by using a chem.  
 amplification-type resist compn. contg. (A) 100 parts film-forming  
 component whose soly. in alkali is changed by the action of acids  
 and (B) 5-20 parts acid generator (R1O2SON:CCN)nR [I; R =  
 nonreactive org. residue; R1 = (halogenated) lower alkyl; n = 1-3],  
 which has molar extinction coeff.  $\epsilon \leq 100$  in i-ray  
 (365 nm), and by irradiating i-ray irradiated at a quantity  
 corresponding to  $\leq 50$  mJ/cm<sup>2</sup> in conversion into the quantity  
 required to form a resist pattern of line-and-space 0.8  $\mu$ m. A Si  
 wafer was coated with a resist comprising m-cresol-HCHO novolak  
 resin, a melamine resin, and I (R = m-C<sub>6</sub>H<sub>4</sub>; R1 = Me; n = 2;

IT 68272-53-7 195394-89-9 195394-90-2  
(chem. amplified resist pattern formation using oxime sulfonate  
as acid generator)  
RN 68272-53-7 ZCA  
CN Benzeneacetonitrile,  $\alpha$ -[[[(methylsulfonyl)oxy]imino]- (9CI)  
(CA INDEX NAME)

CN(C)C(=O)N(S(=O)(=O)C)c1ccc(cc1)N(C)C(=O)N(S(=O)(=O)C)C
$$\text{n-Bu-SO}_2\text{-O-N} \begin{array}{c} \parallel \\ \text{NC-C} \end{array} \text{C}_6\text{H}_4 \begin{array}{c} \parallel \\ \text{C-CN} \end{array} \text{N-O-SO}_2\text{-Bu-n}$$

IT 68272-53-7 195394-89-9 195394-90-2  
(chem. amplified resist pattern formation using oxime sulfonate  
as acid generator)

L13 ANSWER 26 OF 27 ZCA COPYRIGHT 2007 ACS on STN  
 AN 127:255326 ZCA  
 TI Chemical amplification-type resist composition containing  
 oximesulfonate as acid generator  
 IN Haneda, Hideo; Sugata, Yoshiki; Yamazaki, Hiroyuki; Komano, Hiroshi  
 PA Tokyo Ohka Kogyo Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09211846	A	19970815	JP 1996-18008	19960202
	JP 3591743	B2	20041124	<--	
	US 5892095	A	19990406	US 1997-791814	19970130
	US 5973187	A	19991026	US 1998-179818	19981028
	US 5990338	A	19991123	US 1998-179817	19981028

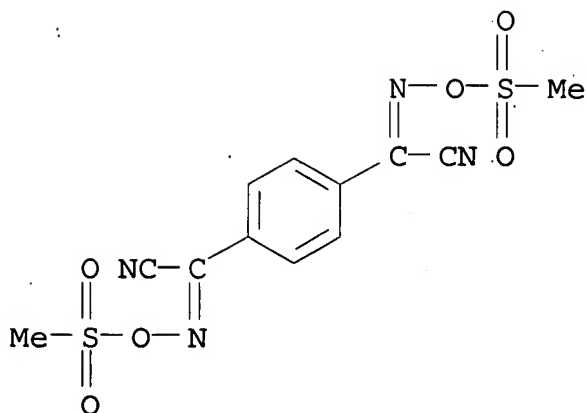
PRAI JP 1996-18008 A 19960202 <--  
 US 1997-791814 A3 19970130 <--

AB The compn. contains a film-forming compd. of which the soly. in alkali changes by acid and an acid generating compd. having 2 or 3 oximesulfonate group RO<sub>2</sub>SON:C(CN) in a mol. The compd. shows high acid generating ratio, and the compn. gives resist patterns with good dimensional stability and heat resistance.

IT 195394-88-8P 195394-92-4P  
 (chem. amplification-type resist compn. contg. oximesulfonate compd. acid generator)

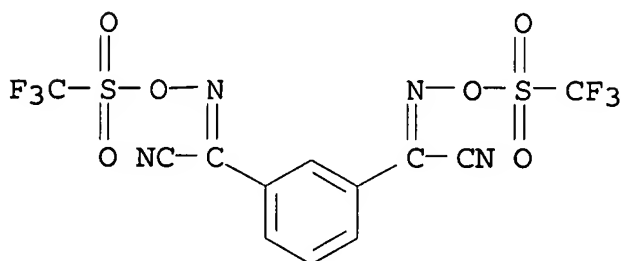
RN 195394-88-8 ZCA

CN 1,4-Benzenediacetonitrile,  $\alpha,\alpha'$ -bis[[ (methylsulfonyl)oxy]imino] - (9CI) (CA INDEX NAME)



RN 195394-92-4 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha, \alpha'$ -  
bis[[[trifluoromethyl)sulfonyl]oxy]imino]- (9CI) (CA INDEX NAME)

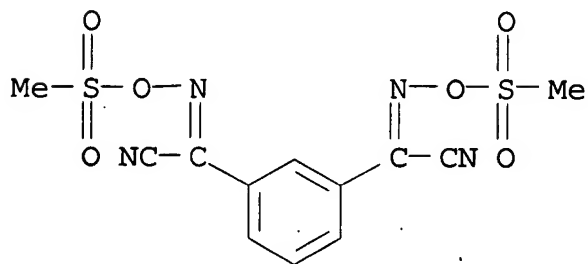


IT 195394-89-9P 195394-90-2P

(chem. amplification-type resist compn. contg. oximesulfonate  
compd. acid generator)

RN 195394-89-9 ZCA

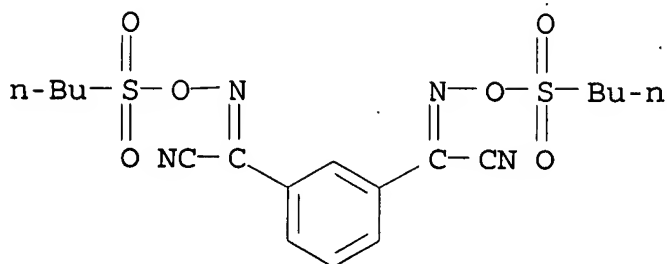
CN 1,3-Benzenediacetonitrile,  $\alpha, \alpha'$ -  
bis[[[methanesulfonyl]oxy]imino]- (9CI) (CA INDEX NAME)



RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha, \alpha'$ -

bis[[ (butylsulfonyl)oxy]imino] - (9CI) (CA INDEX NAME)



IT 195394-88-8P 195394-92-4P  
 (chem. amplification-type resist compn. contg. oximesulfonate  
 compd. acid generator)  
 IT 195394-89-9P 195394-90-2P  
 (chem. amplification-type resist compn. contg. oximesulfonate  
 compd. acid generator)

L13 ANSWER 27 OF 27 ZCA COPYRIGHT 2007 ACS on STN

AN 127:240989 ZCA

TI Oxime sulfonate compound with good heat resistance and acid  
 generator using it for photoresist

IN Haneda, Hideo; Komano, Hiroshi; Nakayama, Toshimasa

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09208554	A	19970812	JP 1996-18007	19960202

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JP 3798458 B2 20060719  
 PRAI JP 1996-18007 19960202 <--

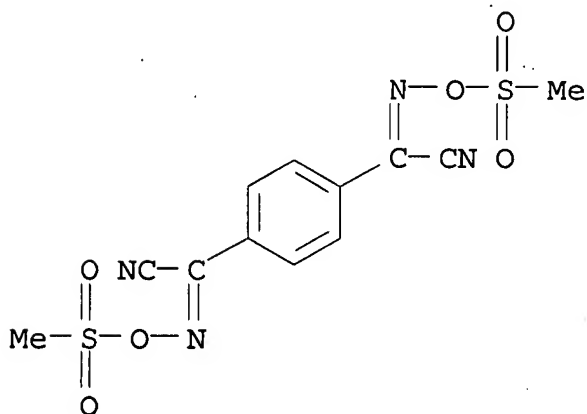
OS MARPAT 127:240989

AB The compd. comprises R1O2SON:C(CN)C6H4C(CN):NOSO2R2 [R1-2 =  
 (un)substituted hydrocarbyl]. The acid generator contains the  
 compd. A resist using the acid generator gave patterns with good  
 dimensional stability and heat resistance.

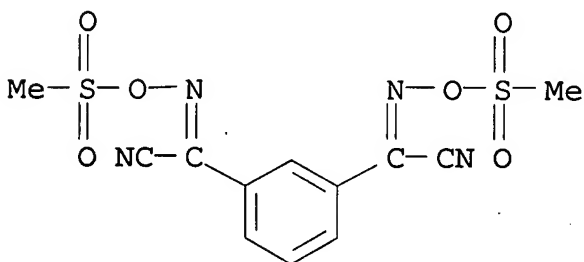
IT 195394-88-8P 195394-89-9P 195394-90-2P  
 195394-92-4P

(oxime sulfonate compd. with good heat resistance for acid  
 generator of photoresist)

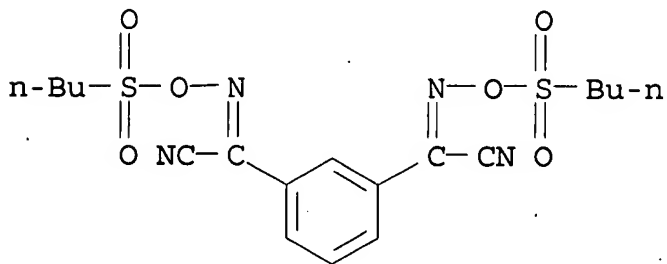
RN 195394-88-8 ZCA

CN 1,4-Benzenediacetonitrile,  $\alpha,\alpha'$ -  
bis[[ (methylsulfonyl)oxy]imino] - (9CI) (CA INDEX NAME)

RN 195394-89-9 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha,\alpha'$ -  
bis[[ (methylsulfonyl)oxy]imino] - (9CI) (CA INDEX NAME)

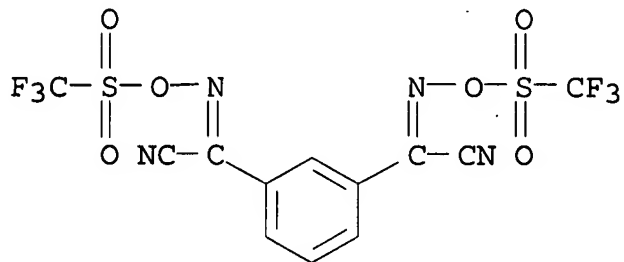
RN 195394-90-2 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha,\alpha'$ -  
bis[[ (butylsulfonyl)oxy]imino] - (9CI) (CA INDEX NAME)

RN 195394-92-4 ZCA

CN 1,3-Benzenediacetonitrile,  $\alpha,\alpha'$ -

bis[[(trifluoromethyl)sulfonyl]oxy]imino] - (9CI) (CA INDEX NAME)



IT 195394-88-8P 195394-89-9P 195394-90-2P  
195394-92-4P

(oxime sulfonate compd. with good heat resistance for acid  
generator of photoresist)